




# MATHEMATICS TEST 1


# TIME- 75 MINUTES

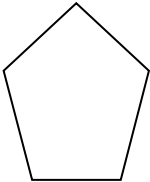
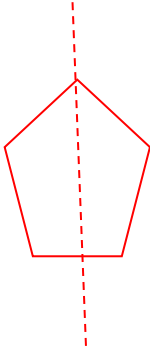
## SECTION 1

Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Marks														
1.	<p>Write two million, five hundred and seventy five thousand and forty-two in numerals.</p> <p>Answer _____</p>	<table><tr><td>M</td><td>HTH</td><td>TTH</td><td>TH</td><td>H</td><td>T</td><td>O</td></tr><tr><td>2</td><td>5</td><td>7</td><td>5</td><td>0</td><td>4</td><td>2</td></tr></table>	M	HTH	TTH	TH	H	T	O	2	5	7	5	0	4	2	
M	HTH	TTH	TH	H	T	O											
2	5	7	5	0	4	2											
2.	<p>Complete the table below</p> <table><tr><td>Common Fraction</td><td>Decimals</td><td>Percent</td></tr><tr><td></td><td>0.6</td><td>60%</td></tr></table> <p>Answer: _____</p>	Common Fraction	Decimals	Percent		0.6	60%	$\frac{3}{5}$									
Common Fraction	Decimals	Percent															
	0.6	60%															
3.	<p>Approximate 43.67 to the nearest <b><u>TENTH</u></b>.</p> <p>Answer: _____</p>	$43.7$															
4.	<p>What percent of 45 is 9?</p> <p>Answer: _____</p>	$\frac{9}{45} \times \frac{100}{1} = 20\%$ $20\%$															
5.	<p>Write in the box the number that correctly completes the number sentence.</p> <div><div><div></div></div><div>12</div></div> <div>=</div> <div><div><div></div></div><div>3</div></div> <p>Answer: _____</p>	$\frac{x}{12} = \frac{2}{3}$ $3x = 24$ $x = 8$															




6.	<p>Darren washes 3 cars each day. How many cars will he wash in four weeks?</p> <p>Answer: _____</p>	<p>1 day = 3 cars  1 week = <math>3 \times 7</math>  = 28 cars  4 weeks = <math>28 \times 4</math>  = 112 cars</p> <p><b>112cars</b></p>	
7.	<p>Which of the two sacks has the lighter mass?</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">   1500g </div> <div style="text-align: center;">   2.5 kg </div> </div> <p>Answer: _____</p>	<p>2.5kg = 2500g</p> <p>Therefore Flour is lighter than Rice</p> <p><b>Flour</b></p>	
8.	<div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; padding: 5px; margin: 0 10px;"> <b>Was</b> \$599 </div>  <div style="border: 1px solid black; padding: 5px; margin: 0 10px;"> <b>Now</b> \$485 </div> </div> <p>Calculate the discount on the price of the bicycle.</p> <p>Answer: _____</p>	<p>Discount = \$ 599 - \$485</p> <p><b>= \$114</b></p>	
9.	<p>Brenda began revision at 6:25 pm. She took a break after 45minutes. At what time did she take a break?</p> <p>Answer: _____</p>	<p style="text-align: center;"> 6 : 25  + : 45  -----  6 : 70  + 1 : - 60  -----  7 : 10 pm </p> <p><b><u>7:10pm</u></b></p>	


10.	<p>The area of a square is <math>64\text{cm}^2</math>. What is the length of <b>ONE</b> side?</p> <p>Answer : _____</p>	<p>Area of Sq. = <math>64\text{cm}^2</math></p> <p>Side = <math>\sqrt{64\text{cm}^2}</math></p> <p>= 8cm</p>	
11.	<p>What is the name of the solid below?</p>  <p>Answer: _____</p>	<p><b>Cylinder</b></p>	
12.	<p>A bowler obtained the following number of wickets in 9 matches.</p> <p>1, 3, 6, 4, 3, 2, 4, 1, 3</p> <p>What is the MODAL number of wickets?</p> <p>Answer: _____</p>	<p><b>3 wickets</b></p>	
13.	<p>What is the least number of bills Sam can have if he has \$37.00?</p> <p>Answer: _____</p>	<p> <math>1 \times \\$20 = \\$20</math>  <math>1 \times \\$10 = \\$10</math>  <math>1 \times \\$5 = \\$5</math>  <math>2 \times \\$1 = \\$2</math>  <b>5 bills = \$37</b> </p> <p><b>5 bills</b></p>	
14.	<p>Sandra bought a watch for \$320 and sold it at a loss of \$40. Calculate her selling price?</p> <p>Answer: _____</p>	<p>C.P = \$320      Loss = \$40</p> <p>Selling Price = <math>\\$320 - \\$40</math></p> <p>= \$ 280</p> <p><b>\$ 280</b></p>	

15.	<p>Three friends collected 20, 15 and 10 game cards respectively. They then divided the cards equally among themselves. How many cards did each friend receive?</p> <p>Answer: _____</p>	<p>Total = <math>20 + 15 + 10</math> = 45</p> <p>Each friend gets = <math>45 \div 3</math> = <b>15</b></p>	
16.	<p>What digit goes in the box?</p> $\begin{array}{r} 462 \\ 3 \square 09 + \\ \hline 540 \\ \hline 4811 \end{array}$ <p>Answer: _____</p>	<p><math>462 + \square + 540 = 4811</math>  <math>= 4811 - (462 + 540)</math>  <math>= 3809</math></p> <p><b>8</b></p>	
17.	<p>How many lines of symmetry are there in the shape below?</p>  <p>Answer: _____</p>		

18.


The pictograph below shows the type of food preferred by a group of pupils.

FOOD	No. OF PUPILS
Chicken	
Fish	
Vegetables	

 represent 2 pupils, how many pupils do NOT prefer vegetables?

Answer: \_\_\_\_\_

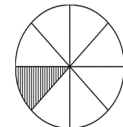
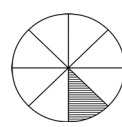
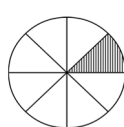
Does Not Prefer = 6

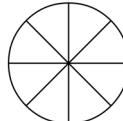
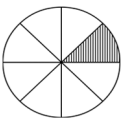
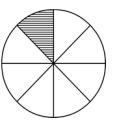
 = 2

Therefore  $6 \times 2$   
= 12


19.

Study the position of the shaded sectors in the circles below.

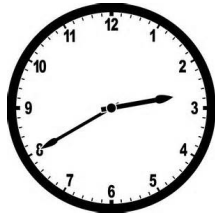




Complete the pattern above by shading the sector in the last circle.



20.



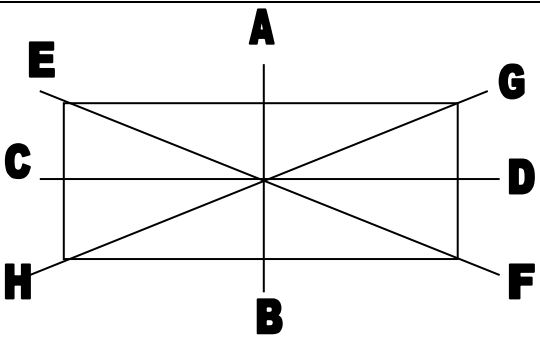
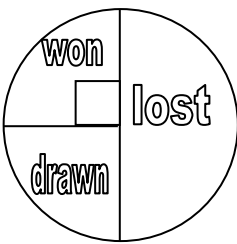
The time on the clock is 15 minutes fast. Write the correct time in digital notation.

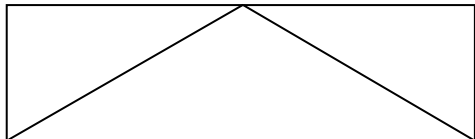
Answer: \_\_\_\_\_

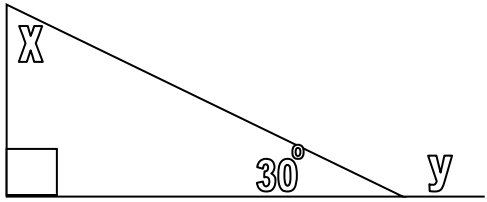
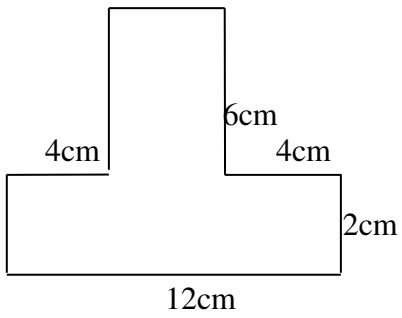
$$\begin{array}{r} 2:40 \\ - \quad :15 \\ \hline 2:25 \end{array}$$

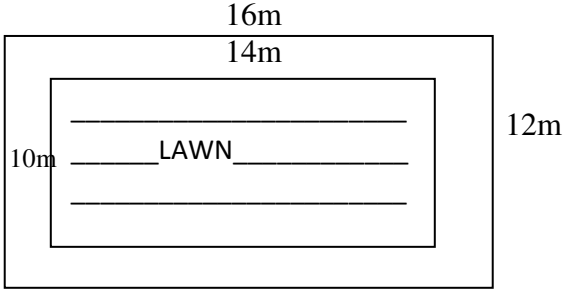
## SECTION 2

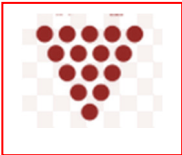
**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

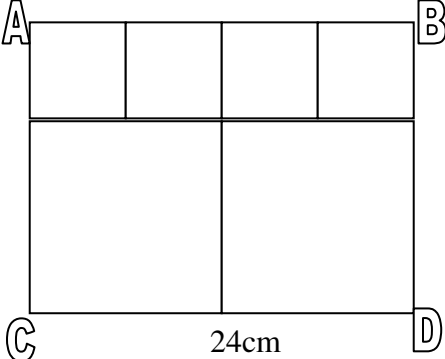
No.	Items	Working Column	Marks
21.	<p>Tessa earns \$3000 per month <b>plus</b> 5% commission on her sales. If her sales total \$8000, calculate her monthly income.</p> <p>Answer: _____(2)</p>	<p>Monthly Earnings = \$ 3000  Commission = 5% x \$ 8000  <math>= \frac{5}{100} \times \frac{8000}{1}</math>  = \$400  Total = \$ 3000 + \$ 400  = \$3400</p> <p style="text-align: center;"><b>\$ 3400</b></p>	
22.	 <p>Name the two lines of symmetry in the rectangle</p> <p>Answer: _____(2)</p>	<p><b>AB &amp; CD</b></p>	
23.	<p>The chart shows the result of a cricket match. If 4 matches were won, how many matches were lost?</p>  <p>Answer: _____(2)</p>	<p>No. of matches won = 4  Therefore <math>\frac{1}{4} = 4</math>  1 = 4 x 4  = 16</p> <p><math>\frac{1}{2} = 16 \div 2</math>  = <b>8</b></p>	

24.	<p>If 75% of a class of 32 students is present, how many students are absent from the class?</p> <p>Answer: _____(2)</p>	<p>Present = 75%</p> <p>Absent = 25%</p> $\frac{25}{100} = \frac{1}{4}$ $\frac{1}{4} \times \frac{32}{1}$ <p>= 8 absent</p>							
25.	<p>In the diagram below, the area of the rectangle is 76 cm<sup>2</sup>. What is the area of the largest triangle?</p>  <p>Answer: _____(2)</p>	<p>Area of rect. = 76 cm<sup>2</sup></p> <p>Area of triangle = 76cm<sup>2</sup> ÷ 2</p> <p>= 38cm<sup>2</sup></p>							
26.	<p>Justin left home at 7:27 am and arrived at work 43 minutes later. He reached to work 10 minutes before the start of work. At what time did his work begin?</p> <p>Answer: _____(3)</p>	<p>Left home = 7 : 27</p> <p>Arrived at work = : 43</p> <p>Arrived = 8 : 10</p> <p>Work Began = : 10</p> <p>8 : 20</p> <p>8 :20am</p>							
27	<p>In a football tournament points were awarded as follows:</p> <table border="1"><tr><td>Win</td><td>3 Points</td></tr><tr><td>Draw</td><td>1 point</td></tr><tr><td>Loss</td><td>0 point</td></tr></table> <p>At the end of 5 matches, a team had 7 points. The team won 2 matches only. How many matches did the team lose?</p> <p>Answer: _____(2)</p>	Win	3 Points	Draw	1 point	Loss	0 point	<p>No. of matches = 5</p> <p>Points awarded = 7</p> <p>Won = 6</p> <p>Rem. = 1 point</p> <p>1 point = 1 game drawn</p> <p>2 games won, 1 game 3 drawn</p> <p>Therefore</p> <p>Lost = 5 – 3</p> <p>= 2</p>	
Win	3 Points								
Draw	1 point								
Loss	0 point								

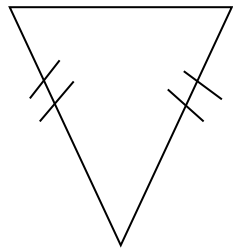
28.	<p>Calculate the number of square tiles measuring 15cm per side that would be required to tile a floor which measures 4.5 m by 3m.</p> <p>Answer: _____(2)</p>	<p>4.5m= 450cm    3m = 300cm</p> $\frac{450^{30} \times 300^{20}}{15^1 \times 15^1}$ <p>= <b>600 tiles</b></p>	
29.	 <p>In the triangle above, calculate</p> <p>a) Angle x</p> <p>Answer: _____(1)</p> <p>b) Angle y</p> <p>Answer: _____(1)</p>	<p>(a) <math>X = 180^\circ - (90 + 30)</math>  <math>= 180^\circ - 120^\circ</math>  <math>= 60^\circ</math></p> <p>(b) <math>Y = 180^\circ - 30^\circ</math>  <math>= 150^\circ</math></p>	
30.	 <p>Area: _____ Perimeter: _____</p> <p>Answer: _____(3)</p>	<p>Area of shape A = L x W  <math>= 6 \times 4</math>  <math>= 24\text{cm}^2</math></p> <p>Area of shape B = L x W  <math>= 12 \times 2</math>  <math>= 24\text{cm}^2</math></p> <p><b>**Total Area = <math>24\text{cm}^2 + 24\text{cm}^2</math>  <math>= 48\text{cm}^2</math></b></p> <p>Perimeter of shape =  <math>4 + 6 + 4 + 2 + 12 + 2 + 4 + 6</math>  <math>= 40\text{cm}</math></p>	

31.	 <p>A lawn is surrounded by a concrete walkway as shown above. The lawn is 14m long and 10m wide. The dimensions outside of the concrete walkway are 16m long and 12m wide.</p> <p>a) Calculate the area of the lawn</p> <p>Answer: _____(1)</p> <p>b) Calculate the area of the concrete walkway.</p> <p>Answer: _____(2)</p>	<p>(a) Area of Lawn = <math>L \times W</math>  <math>= 14 \times 10</math>  <math>= 140\text{m}^2</math></p> <p>(b) Total Area of Surface = <math>L \times W</math>  <math>= 16 \times 12</math>  <math>= 192\text{m}^2</math></p> <p>Area of c.walkway = <math>192 - 140</math>  <math>= 52\text{m}^2</math></p>	
32.	<p>Every weekend, Harry's family rents three cartoon and two action movies. By the time the family rents thirty six cartoons, how many action movies will have rented?</p> <p>Answer: _____(2)</p>	<p>3 cartoons = 2 actions  1 cartoon = <math>\frac{2}{3}</math> action  36 cartoons = <math>\frac{2}{3} \times \frac{36 \times 12}{1}</math>  <math>= 12 \times 2</math>  <math>= 24</math> action movies</p>	
33.	<p>Street lights are placed 20m apart on a street 480m long. Calculate how many street lights were along the street?</p> <p>Answer: _____(2)</p>	<p>Street = 480 m  Lights = <math>\frac{480 - 20}{20} + 1</math>  <math>= 24 + 1</math>  <math>= 25</math> street lights</p>	

34.	<p>A piece of flexible plastic rod 48cm long was used to make a square frame.</p> <p>(a) What is the length of 1 side of the square?</p> <p>Answer: _____(1)</p> <p>(b) What is the area of the square frame?</p> <p>Answer: _____(1)</p>	<p>(a) Perimeter of square = 48cm</p> $\text{Side} = \frac{48}{4} = 12\text{cm}$ <p>(b) Area of Square = S x S</p> $= 12 \times 12 = 144 \text{ cm}^2$																					
35.	<p>(a) Complete the pattern for the 5<sup>th</sup> box below. (2)</p> <div style="display: flex; align-items: center; gap: 10px;"> <div style="border: 1px solid black; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;">•</div> <div style="border: 1px solid black; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;">•••</div> <div style="border: 1px solid black; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;">•••••</div> <div style="border: 1px solid black; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;">•••••••</div> <div style="border: 1px solid black; width: 40px; height: 40px;"></div> </div> <p>(b) How many dots would form the patterns in the 7<sup>th</sup> box?</p> <p>Answer: _____(1)</p>	 <p>7<sup>th</sup> box = 21 + 7 = 28 dots</p>																					
36.	<p>Complete the Bill below</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 20%;">Items</th><th style="width: 20%;">Quantities</th><th style="width: 20%;">Cost/kg</th><th style="width: 40%;">TOTAL</th></tr> </thead> <tbody> <tr> <td>Potatoes</td><td>2kg</td><td>\$2.50</td><td><div style="border: 1px solid black; width: 60px; height: 20px; margin: 0 auto;"></div></td></tr> <tr> <td>Rice</td><td>2.5kg</td><td><div style="border: 1px solid black; width: 60px; height: 20px; margin: 0 auto;"></div></td><td>\$15.00</td></tr> <tr> <td>Chicken</td><td><div style="border: 1px solid black; width: 60px; height: 20px; margin: 0 auto;"></div></td><td>\$16.00</td><td>\$48.00</td></tr> <tr> <td colspan="3">TOTAL</td><td>\$68.00</td></tr> </tbody> </table> <p>Answer: _____(3)</p>	Items	Quantities	Cost/kg	TOTAL	Potatoes	2kg	\$2.50	<div style="border: 1px solid black; width: 60px; height: 20px; margin: 0 auto;"></div>	Rice	2.5kg	<div style="border: 1px solid black; width: 60px; height: 20px; margin: 0 auto;"></div>	\$15.00	Chicken	<div style="border: 1px solid black; width: 60px; height: 20px; margin: 0 auto;"></div>	\$16.00	\$48.00	TOTAL			\$68.00	<p><b>Potatoes \$ 2.50 x 2 = \$ 5.00</b></p> $\$15 \div 2.5 = \frac{15}{1} \div \frac{5}{2} = \frac{15 \cancel{3}}{1} \div \frac{2}{\cancel{5} 1} = 3$ <p><b>Rice = \$6.00</b></p> <p><b>Chicken = \$ 48 3</b> = \$46 1 = 3kg</p>	
Items	Quantities	Cost/kg	TOTAL																				
Potatoes	2kg	\$2.50	<div style="border: 1px solid black; width: 60px; height: 20px; margin: 0 auto;"></div>																				
Rice	2.5kg	<div style="border: 1px solid black; width: 60px; height: 20px; margin: 0 auto;"></div>	\$15.00																				
Chicken	<div style="border: 1px solid black; width: 60px; height: 20px; margin: 0 auto;"></div>	\$16.00	\$48.00																				
TOTAL			\$68.00																				

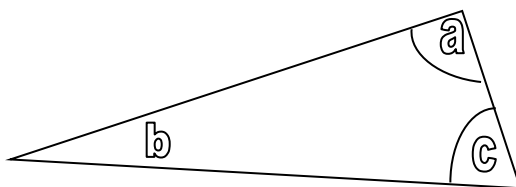
37	 <p>Rectangle ABCD is made up of 2 large identical squares and 4 small identical squares. Calculate:</p> <p>(a) The length of each of the side of the small square if DC= 24cm Answer: _____(1)</p> <p>(b) The area of the rectangle ABCD Answer: _____(2)</p>	$DC = 24\text{cm}$ $AB = 24\text{cm}$ $24 \div 4 = 6\text{cm}$ <p>(a) Each small square has a side of <b>6cm</b></p> $AC = 24 + 6 = 30\text{cm}$ <p>(b) Area of Rectangle = L x W  <math display="block">= 18 \times 24 = 432 \text{ cm}^2</math></p>	
38.	<p>Tom invested \$20,000 for 5 years at 8% per annum. Calculate:</p> <p>(a) The amount of interest Tom collected for one year. Answer: _____(1)</p> <p>(b) The total amount he would collect from his investment. Answer: _____(2)</p>	<p>(a) Simple Interest = <math>\frac{P \times R \times T}{100}</math></p> $= \frac{20000 \times 1 \times 8}{100}$ <p><b>1 year = \$ 1600</b></p> <p>(b) 5 years = \$ 1600 x 5  <math display="block">= \\$ 8000</math></p> <p>Amount = Principal + S.I  <math display="block">= 20000 + \\$ 8000 = \\$ 28000</math></p>	

39.



(a) Name the type of triangle shown above.

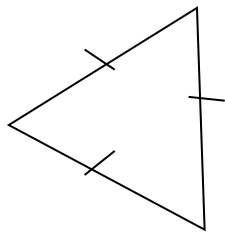
Answer: \_\_\_\_\_(1)



(b) Arrange the angles in order of size starting from the LARGEST.

Answer: \_\_\_\_\_(1)

(c) On the triangle below, draw all the lines of symmetry.

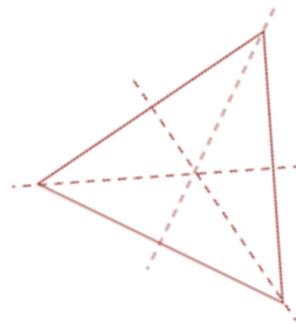


Answer: \_\_\_\_\_(1)

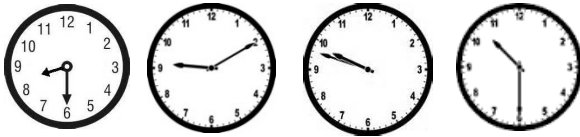
(a) **Isosceles Triangle**

(b) **C, A, B**

(c)



40. The clocks below show the starting time of each of four subjects on a time table.



Maths Grammar Composition Vocab

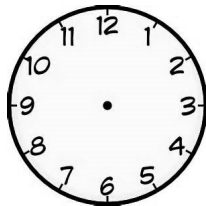
- (a) How many minutes after the start of each subject does the next subject start?

Answer: \_\_\_\_\_(1)

- (b) The 5<sup>th</sup> subject is Science. At what time would Science begin?

Answer: \_\_\_\_\_(1)

- (c) One the clock below, draw the hands to show the starting time of Science.  
(1)

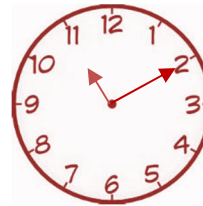


(a) **40 minutes**

(b) **10 : 30 + 40**

**= 11: 10**

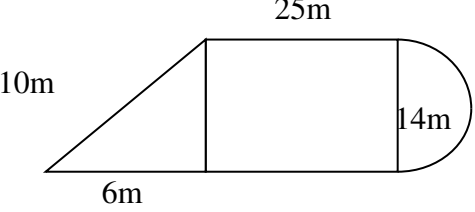
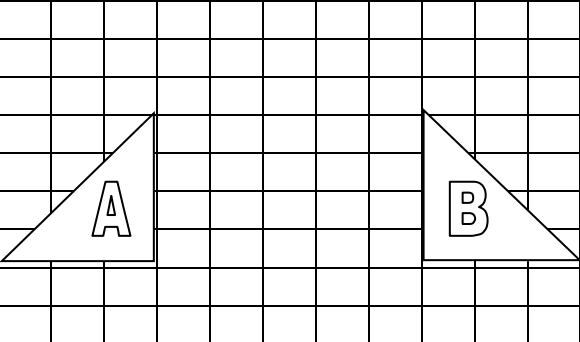
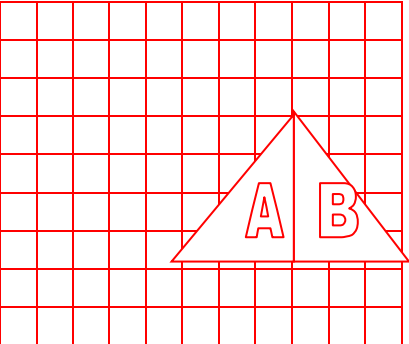
(c)



### SECTION 3
















**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
41.	<p>Mother shared \$320 between Samantha and Shawn, giving Shawn <math>12\frac{1}{2}\%</math> more than Samantha.</p> <p>(a) Calculate how much money each child received.  Samantha= \$ _____  Shawn= \$ _____</p> <p>Answer: _____ (2)</p> <p>(b) Shawn spent <math>\frac{1}{5}</math> of his money on snacks and <math>\frac{5}{12}</math> of the remainder on a toy.  Calculate how much money he had left.</p> <p>Answer: _____ (3)</p>	<p>(a) Shawn = <math>12\frac{1}{2}\%</math>  <math>= \frac{1}{8}</math>  <math>\frac{1}{8} \times \frac{320 \times 40}{1}</math>  <math>= 40</math>  <math>320 - 40 = 280</math>  <math>\frac{280}{2} = 140</math>  2</p> <p>Samantha = <b>\$140</b>  Shawn = \$140 + \$ 40  = <b>\$180</b></p> <p>(b) Snacks = <math>\frac{1}{5}</math>  Remainder = <math>\frac{4}{5}</math>  Toy = <math>\frac{5}{12} \times \frac{4}{5} = \frac{1}{3}</math>  Spent = <math>\frac{1}{5} + \frac{1}{3}</math>  <math>= \frac{8}{15}</math>  Left = <math>\frac{15}{15} - \frac{8}{15}</math>  <math>= \frac{7}{15}</math>  <math>\frac{7}{15} \times \frac{180}{1}</math>  = <b>\$ 84</b></p>	

42	 <p>The compound figure above is made up of a triangle, a rectangle and semi-circle. Calculate</p> <p>(a) The radius of the semi-circle. Answer: _____(1)</p> <p>(b) The perimeter of the whole figure. Answer: _____(2)</p> <p>(c) The area of the figure without the semi-circle. Answer: _____(2)</p>	<p>(a) Radius = <math>D \div 2</math>  <math>= 14 \div 2</math>  <math>= 7\text{m}</math></p> <p>(b) Circumference = <math>\frac{1}{2} (D \times \pi)</math>  <math>= \frac{1}{2} \left( \frac{14}{1} \times \frac{22}{7} \right)</math>  <math>= \frac{1}{2} \times 44</math>  <math>= 22\text{m}</math></p> <p>Perimeter = <math>22 + 25 + 6 + 10 + 25</math>  <math>= 88\text{m}</math></p> <p>(c) Area of rect. = <math>25 \times 14</math>  <math>= 350\text{m}^2</math>          Area of triangle = <math>\frac{14 \times 6}{2}</math>  <math>= 42\text{m}^2</math>          Total Area = <math>350\text{m}^2 + 42\text{m}^2</math>  <math>= 392\text{m}^2</math></p>	
43.	<p>On the grid below are two triangles labelled A and B.</p>  <p>(a) Move triangle A to meet triangle B. Draw the combined shape on the same grid. Answer: _____(1)</p> <p>(b) Describe the transformation Answer: _____(2)</p> <p>(c) What is the name given to the combined shape? Answer: _____(1)</p> <p>(d) Calculate the area of the combined shape if each square represents <math>1\text{cm}^2</math>. Answer: _____(1)</p>	 <p>(b) Slide five (5) units right</p> <p>(c) Isosceles Triangle</p> <p>(d) Area of <math>\triangle = \frac{B \times H}{2}</math>  <math>= \frac{6 \times 4}{2}</math>  <math>= 12\text{cm}^2</math></p>	

44.

The pictograph below shows the number of cars sold for the first four months of the year by Sam's Motor Company.

NUMBER OF CARS SOLD	
January	 
February	   
March	    
April	   



= 10 cars

(a) How many cars were sold in April?

Answer: \_\_\_\_\_(1)

(b) How many more cars were sold in February than in January?

Answer: \_\_\_\_\_(1)

(c) What percentage of all cars was sold in March?

Answer: \_\_\_\_\_(2)

(d) If each car was sold for \$125,000.00. Calculate how much money the company made.

Answer: \_\_\_\_\_(1)

$$(a) \text{ April} = 4 \times 10 \\ = \mathbf{40 \text{ cars}}$$

$$(b) \text{ Feb.} - \text{Jan} = 40 - 20 \\ = \mathbf{20 \text{ cars}}$$

$$(c) \text{ Total} = \mathbf{150 \text{ cars}}$$

$$\text{March} = 50 \text{ cars}$$

$$\text{Percentage} = \frac{50}{150} \times \frac{100}{1}$$

$$= \mathbf{33\frac{1}{3} \%}$$

$$(d) \text{ Total Income} \\ = \$125\,000 \times 150 \\ = \mathbf{\$18\,750\,000}$$

45.

**Buy 4 and Get 1 FREE!!!**



FREE

Cds cost \$15.00 each

- (a) How many **free** CDs would you get altogether for \$300.00?

Answer: \_\_\_\_\_(2)

- (b) How many CDs would you get altogether for your \$300.00?

Answer: \_\_\_\_\_(1)

- (c) Your brother also bought CDs on sale. He received 15 CDs. How much money did he spend?

Answer: \_\_\_\_\_(2)

$$(a) \frac{\$300}{\$15} = 20 \text{ CDs}$$

$$\text{Free} = \frac{20}{4} = 5 \text{ free CDS}$$

$$(b) \text{Total} = 20 + 5 = 25 \text{ CDs}$$

$$(c) \text{Received} = 15 \text{ CD's}$$

$$\text{Free} = \frac{15}{5} = 3 \text{ free CD's}$$

$$\text{Bought} = 15 - 3 = 12 \text{ CDs}$$

$$** \text{Spent} = 12 \times \$15 = \$180$$

46.	<p>Harry's marks in four tests are 84, 69, 89 and 46 respectively.</p> <p>(a) Calculate Harry's total score in the four tests?  Answer: _____(1)</p> <p>(b) Calculate Harry's mean score in the four tests?  Answer: _____(1)</p> <p>(c) Harry did two more tests and his mean score is now 80. How many marks did he score in the next two tests?  Answer: _____(2)</p> <p>(d) What was his mean score in the last two tests?  Answer: _____(1)</p>	<p>(a) <math>\text{Total} = 84 + 69 + 89 + 46</math>  <math>= 288</math></p> <p>(a) <math>\text{Mean} = \frac{288}{4}</math>  <math>= 72 \text{ marks}</math></p> <p>(b) <math>80 \times 5 = 400</math>  <math>= 400 - 288</math>  <math>= 112 \text{ marks}</math></p> <p>(c) <math>\text{Mean Score} = \frac{112}{2}</math>  <math>= 56 \text{ marks}</math></p>	
	END OF TEST 1		

# TEST

# 2

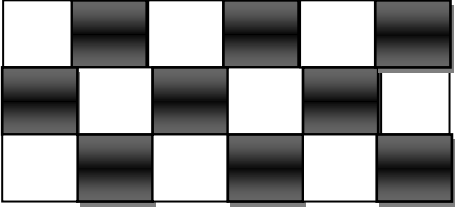
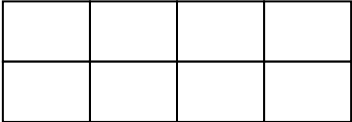
# MATHEMATICS TEST 2

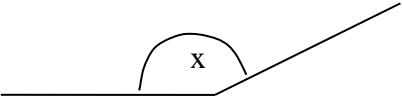

# TIME- 75 MINUTES

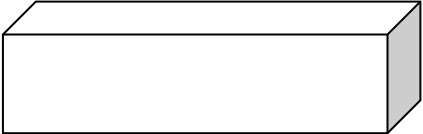
## SECTION 1

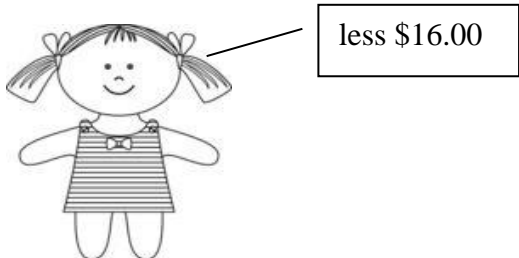
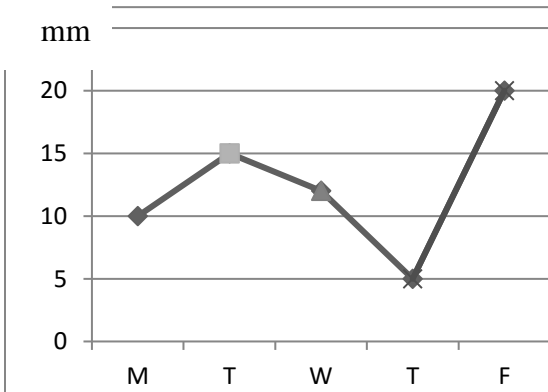
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Marks
1.	Write 216 004 in words.  Answer: _____ _____	<b>Two hundred and sixteen thousand and four.</b>	
2.	Estimate 9657 to the nearest ten.  Answer: _____	$\begin{array}{r} 9657 \\ +1 \\ \hline 9660 \end{array}$	
3.	Calculate $16 \div 0.5$  Answer: _____	$\begin{aligned} 16 \div 0.5 \\ = 160 \div 5 \\ = 32 \end{aligned}$	
4.	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <math>&gt;</math>      <math>&lt;</math>      <math>=</math> </div> <p>Use ONE of the symbols above to complete</p> <p style="text-align: center;"><math>\frac{2}{3}</math>    <span style="border: 1px solid black; padding: 0 10px;"> </span>    <math>\frac{5}{6}</math></p> <p>Answer: _____</p>	$\frac{2}{3} = \frac{4}{6}$ $** \frac{2}{3} < \frac{5}{6}$	

5.	<p>What fraction is shaded?</p>  <p>Answer: _____</p>	<p>Total = 18 Shaded = <math>\frac{9}{18}</math> <math>= \frac{1}{2}</math></p>	
6.	<p>Calculate:</p> $\sqrt{4} \times 3^3 =$ <p>Answer: _____</p>	<p><math>\sqrt{4} \times 3^3</math> <math>2 \times 27</math> <math>= 54</math></p>	
7.	<p>What FRACTION of 96 is 32?</p> <p>Answer: _____</p>	<p><math>\frac{32}{96} = \frac{1}{3}</math></p>	
8.	<p>How many units make up the distance around the shape below?</p>  <p>Answer: _____</p>	<p><b>12 units</b></p>	
9.	<p>What is the value of the 8 in 24.837?</p> <p>Answer: _____</p>	<p><math>\frac{8}{10}</math> or 0.8</p>	

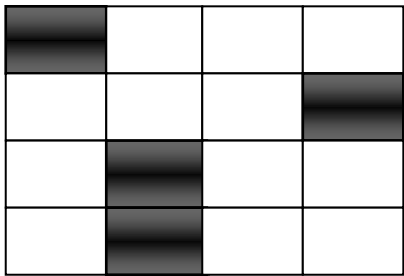
10.	<p>How many millimetres is equal to <math>\frac{1}{4}</math> litre?</p> <p>Answer: _____</p>	250 ml	
11.	<div style="border: 1px solid black; padding: 5px; display: inline-block;">obtuse   right   acute</div> <p>Which word above names angle X below</p>  <p>Answer: _____</p>	Obtuse	
12.	<p>The stamp below has a length of 4 cm and an area of <math>12 \text{ cm}^2</math>. What is its width?</p>  <p style="margin-left: 150px;">4 cm</p> <p>Answer: _____</p>	<p>Width = <math>\frac{\text{Area}}{\text{Length}}</math></p> <p style="margin-left: 100px;"><math>= \frac{12}{4}</math></p> <p style="margin-left: 100px;"><math>= 3\text{cm}</math></p>	

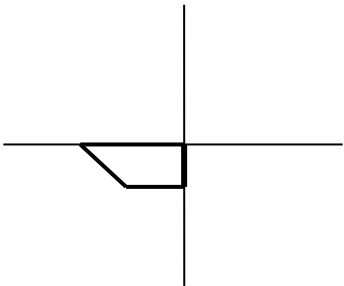
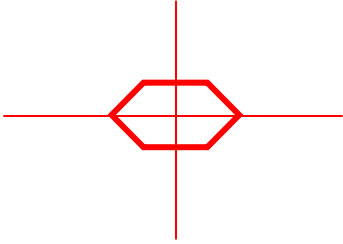
13.	<p>Name the solid below.</p>  <p>Answer: _____</p>	<b>Cuboid</b>	
14.	<p>What is <math>\frac{2}{5}</math> of 200?</p> <p>Answer: _____</p>	$\frac{2}{5} \times \frac{200}{1}$ $= 80$	
15.	<p>Calculate <math>2.4 \times 0.6</math></p> <p>Answer: _____</p>	<b>1.44</b>	
16.	<p>What is 0.25 as a PERCENT?</p> <p>Answer: _____</p>	$0.25 \times 100$ $= 25\%$	
17.	$\begin{array}{r} 214 \times \\ \underline{16} \end{array}$ <p>Answer: _____</p>	$\begin{array}{r} 214 \times \\ \underline{16} \\ 1284 + \\ \underline{2140} \\ 3424 \end{array}$	

18.	<p>The doll below costs \$48.00 after the discount. What was the price BEFORE the discount?</p> <div></div> <p>Answer:_____</p>	<p>Selling Price = \$ 48 + \$ 16 = \$ <b>64</b></p>	
19.	<p>What is 20% of 80 cars?</p> <p>Answer:_____</p>	<p><math>\frac{20}{100} \times \frac{80}{1}</math> = <b>16 cars</b></p>	
20.	<p>The line graph shows the rainfall for five days.</p> <div></div> <p>How many mm of rain fell on Tuesday?</p> <p>Answer:_____</p>	<p><b>15 mm</b></p>	

## SECTION 2

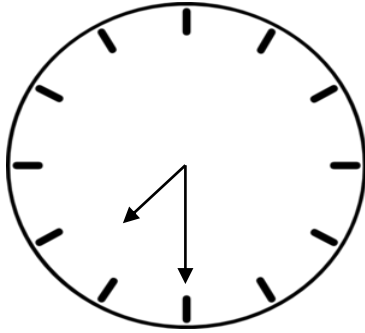
**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
21.	<p>What is the difference between 2715 and 1389?</p> <p>Answer: _____ (2)</p>	$  \begin{array}{r}  2715 - \\  \underline{1389} \\  1326 \\  \hline  1326  \end{array}  $	
22.	<p>For a concert each child is asked to sell 4 raffle sheets. How many raffle sheets were distributed to a class of 29 children?</p> <p>Answer: _____ (2)</p>	$  \begin{array}{l}  1 \text{ child} = 4 \text{ raffle sheets} \\  29 \text{ children} = 4 \times 29 \\  = 116 \text{ raffle sheets}  \end{array}  $	
23.	<p>What <b>PERCENT</b> of the shape is <b>NOT</b> shaded?</p>  <p>Answer: _____ (2)</p>	$  \begin{array}{l}  \text{Total} = 16 \text{ units} \\  \text{Not Shaded} = 12 \text{ units} \\  \text{Percentage Not Shaded} = \frac{12}{16} \times \frac{100}{1} \\  = 75 \%  \end{array}  $	

24.	<p>On Friday, a fruit vendor sold 120 apples, on Saturday half as many and on Sunday <math>\frac{2}{3}</math> of Friday's sales. How many apples were sold in all?</p> <p>Answer: _____ (3)</p>	<p>Friday = 120 apples  Saturday = 60 apples <math>\{ \frac{1}{2} \times \frac{120}{1} \}</math>  Sunday = 80 apples <math>\{ \frac{2}{3} \times \frac{120}{1} \}</math>  Total = 120 + 60 + 80  = <b>260 apples</b></p>	
25.	<p>Complete the pattern of numbers below.</p> <pre>       1     2 2   3 4 3 a   5 6 <input type="text"/> 5 b   7 8 <input type="text"/> 8 7 c   8 <input type="text"/> 12 12 10 8 </pre> <p>Answer: a _____ b _____  c _____ (3)</p>	<p>a = <b>6</b>  b = <b>9</b>  c = <b>10</b></p>	
26.	<p><math>4\frac{4}{5} \div \frac{3}{10}</math></p> <p>Answer: _____ (2)</p>	<p><math>\frac{24}{5} \div \frac{3}{10}</math>  <math>\frac{24}{5} \times \frac{10}{3}</math>  = <b>16</b></p>	
27.	<p>The diagram below is formed AFTER a shape was folded TWO times, once along a vertical and a horizontal line of symmetry.</p> <p>Complete the diagram for the original shape.</p>  <p>Answer: _____ (3)</p>		

28.	<p><math>\frac{3}{5}</math> of Jake's game cards equals <math>\frac{2}{3}</math> of Anil's cards. Anil has 36 cards. How many cards does Jake have?</p> <p>Answer: _____ (3)</p>	<p>Anil = 36</p> $\frac{2}{3} \times \frac{36}{1}$ <p>= 24 cards</p> $\frac{3}{5} = 24$ $1 = \frac{24}{1} \times \frac{5}{3}$ <p>Jake = <b>40 cards</b></p>	
29.	<p>What is the sum of <math>\frac{3}{10}</math> and <math>\frac{7}{100}</math> as a <b>DECIMAL</b> number?</p> <p>Answer: _____ (3)</p>	$\frac{3}{10} + \frac{7}{100}$ <p>= 0.3 + .07</p> <p>= <b>0.37</b></p>	
30.	<p>Anisa has \$68.00 while Sumaya has \$12.00 <b>LESS</b>. How much money do both girls have altogether?</p> <p>Answer: _____ (2)</p>	<p>Anisa = \$ 68</p> <p>Sumaya = \$ 56 ( 68 -12)</p> <p>Total = <b>\$124</b></p>	
31.	<p>Any <b>THREE</b> circles running vertically, diagonally or horizontally add up to the same total. Fill in <b>TWO</b> missing numbers.</p> <div style="display: flex; flex-direction: column; align-items: center;"> <div style="display: flex; justify-content: space-around; width: 100%;"> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;">8</div> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;">3</div> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;"></div> </div> <div style="display: flex; justify-content: space-around; width: 100%;"> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;">1</div> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;">5</div> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;"></div> </div> <div style="display: flex; justify-content: space-around; width: 100%;"> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;">6</div> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;">7</div> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;">2</div> </div> </div> <p>Answer: _____ (2)</p>	<p>Total of any line = 15 (6+7+2)</p> <div style="display: flex; flex-direction: column; align-items: center;"> <div style="display: flex; justify-content: space-around; width: 100%;"> <div style="display: flex; align-items: center;">** 8</div> <div style="display: flex; align-items: center;">3</div> <div style="display: flex; align-items: center;"><b>4</b></div> </div> <div style="display: flex; justify-content: space-around; width: 100%; margin-top: 10px;"> <div style="display: flex; align-items: center;">1</div> <div style="display: flex; align-items: center;">5</div> <div style="display: flex; align-items: center;"><b>9</b></div> </div> <div style="display: flex; justify-content: space-around; width: 100%; margin-top: 10px;"> <div style="display: flex; align-items: center;">6</div> <div style="display: flex; align-items: center;">7</div> <div style="display: flex; align-items: center;">2</div> </div> </div>	

32. Daddy left home at the time shown below and arrived at work 40 minutes later.



- a) On the clock above, draw in the **NEW** position of the **MINUTE** hand.

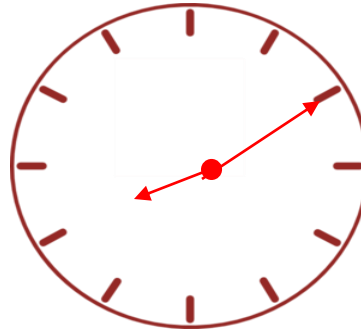
Answer: \_\_\_\_\_(1)

- b) Through what angle did the minute hand turn?

Answer: \_\_\_\_\_(1)

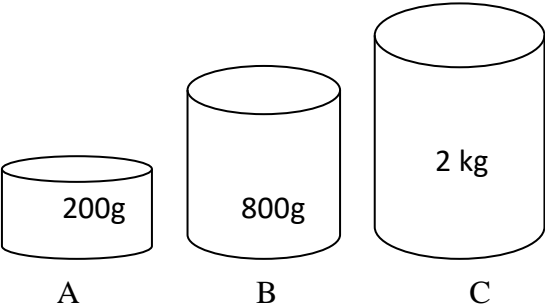
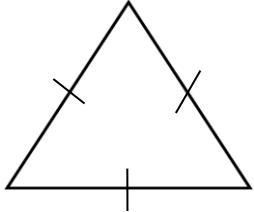
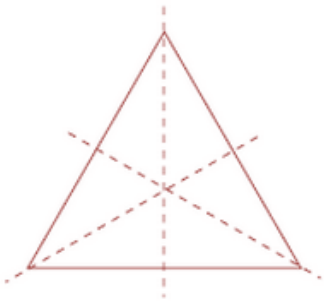
- c) At what time did Daddy arrive at work?

Answer: \_\_\_\_\_ a.m. (1)

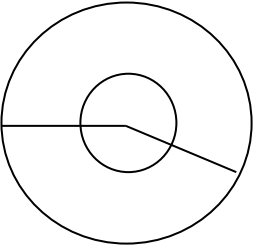
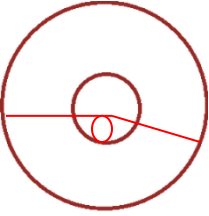


$$\begin{aligned} \text{(b) } 1 \text{ space} &= 30^\circ \\ 8 \text{ spaces} &= 30^\circ \times 8 \\ &= \mathbf{240^\circ} \end{aligned}$$

(c) 8:10

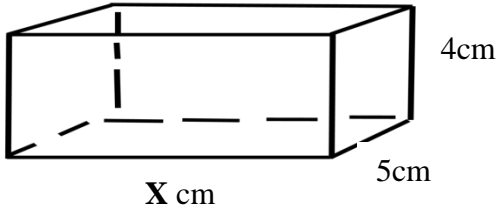
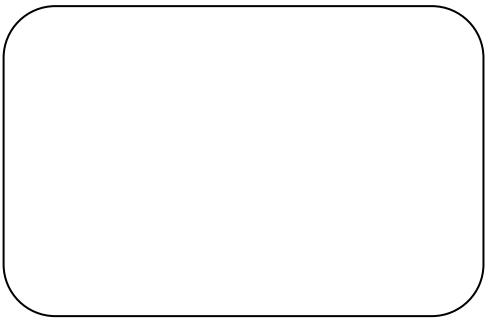
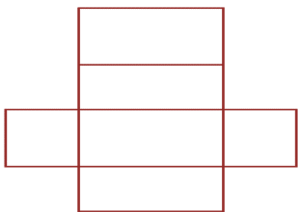
<p>33.</p>	<p>Chocolate syrup is sold in the cans shown below. The costs are in a proportion to the weight of the syrup.</p> <div style="text-align: center;">  </div> <p>A \$5.00</p> <p>B</p> <p>C</p> <p>a) How much will container B cost?</p> <p>Answer: _____(1)</p> <p>b) How much will container C cost?</p> <p>Answer: _____(2)</p>	$200\text{g} = \frac{1}{5} \text{ kg}$ $\frac{1}{5} \text{ kg} = \$5$ $1\text{kg} = \$5 \times 5$ $= \$25$ $\frac{800}{1000} = \frac{4}{5}$ <p>(a) Can B = <math>\frac{4}{5} \times \frac{25}{1}</math></p> $= \$20$ <p>(b) Can C = <math>\\$25 \times 2</math></p> $= \$50$	
<p>34.</p>	<p>A roll of gift wrapping paper is 80 cm wide and 400 cm long. How many pieces, each 40 cm by 50 cm can be cut from the roll?</p> <p>Answer: _____(3)</p>	$\frac{80 \times 400}{40 \times 50}$ $= \mathbf{16 \text{ pieces}}$	
<p>35.</p>	<div style="text-align: center;">  </div> <p>a) Name the type of triangle shown above?</p> <p>Answer: _____(1)</p> <p>b) Draw in its lines of symmetry.</p> <p>Answer: _____(2)</p>	<p>(a) Equilateral Triangle</p> <p>(b)</p> <div style="text-align: center;">  </div>	

36.	Wayne had 60 oranges. He gave $\frac{1}{3}$ of them to his cousin and $\frac{2}{5}$ to his friends. How many oranges does Wayne have left?	$\text{Cousin} = \frac{1}{3} \times \frac{60}{1}$ $= 20 \text{ oranges}$ $\text{Friends} = \frac{2}{5} \times \frac{60}{1}$ $= 24 \text{ oranges}$ $\text{Kept} = 60 - (20 + 24)$ $= 60 - 44$ $= \mathbf{16 \text{ oranges}}$	
	Answer: _____ (3)		
37.	The mean weight of 3 heaps of sorrel is 21 kg. One of the heaps weighs 17 kg and another weighs 24 kg. What is the weight of the last heap?	$\text{Mean} = 21 \text{ kg}$ $\text{Total} = 21 \times 3$ $= 63 \text{ kg}$ $\text{Third Heap} = 63 - (17 + 24)$ $= \mathbf{22 \text{ kg}}$	
	Answer: _____ (3)		

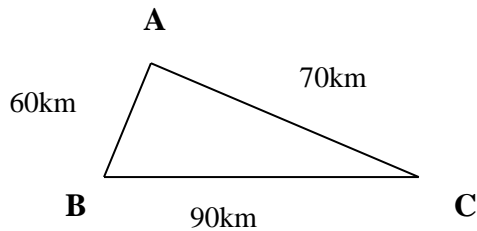
<p>38.</p>	<p>a) Label the <b>OBTUSE</b> angle 'O' in the circle below.          Answer: _____ (1)</p>  <p>b) What is the name given to the remaining angle?          Answer: _____ (1)</p>	<p>(a)</p>  <p>(b) Reflex Angle</p>	
<p>39.</p>	<p>Sanjay has \$1.86, made up of 25¢, 5¢ and 1¢ coins. What is the <b>LEAST</b> number of coins to make up his money?          Answer: _____ (2)</p>	$  \begin{array}{r}  \$1.86 - \\  \underline{\$1.75 \{ 7 - 25c \}} \\  .11 - \\  \underline{.10 \{ 2 - 5c \}} \\  .01 \{ 1 - 1c \}  \end{array}  $ <p><b>Total Number of Coins = 10</b></p>	
<p>40.</p>	<p>A box contains 40 chocolates. 30 of them are eaten. What percent of the chocolates is <b>LEFT</b>?          Answer: _____ (2)</p>	$  \begin{aligned}  \text{Total} &= 40 \\  \text{Left} &= 10 (40 - 30) \\  \text{Percent} &= \frac{10}{40} \times \frac{100}{1} \\  &= \mathbf{25\%}  \end{aligned}  $	

### SECTION 3

**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
41.	<p>The uncovered plastic container below holds <math>160 \text{ cm}^3</math> of water when completely filled.</p>  <p style="text-align: center;">X cm</p> <p>a) Find the length marked x. Answer: _____ (2)</p> <p>b) Draw the net of the plastic container in the space below.</p>  <p>Answer: _____ (3)</p>	<p>(a) <math>\text{Length} = \frac{\text{Volume}}{\text{W} \times \text{H}}</math>  <math>= \frac{160 \text{ cm}^3}{5 \times 4}</math>  <math>= \frac{160 \text{ cm}^3}{20 \text{ cm}}</math>  <math>= 8 \text{ cm}</math></p> <p>(b)</p> 	

42. The diagram shows the location of three towns labeled A,B,C.



- a) Mitch travels from Town A to B and then to C. How many kilometres did he travel altogether?

Answer: \_\_\_\_\_ (2)

- b) The journey from town A to B took 3 hours. At what speed was Mitch travelling?

Answer: \_\_\_\_\_ (1)

- c) If Mitch travelled at this rate from town A through B, then C and back to A, how long, in **HOURS**, would the journey take?

Answer: \_\_\_\_\_ (2)

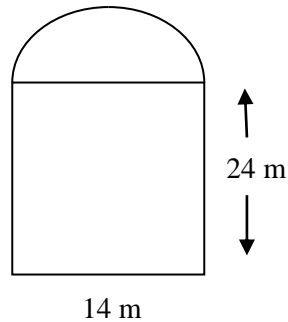
$$\begin{aligned} \text{(a) A to B} &= 90 + 60 \\ &= 150 \text{ km} \end{aligned}$$

$$\begin{aligned} \text{(b) Speed} &= \frac{\text{Distance}}{\text{Time}} \\ &= \frac{60}{3} \\ &= \mathbf{20 \text{ km/hr}} \end{aligned}$$

$$\begin{aligned} \text{(c) Total Distance} &= 60 + 90 + 70 \\ &= 220 \text{ km} \end{aligned}$$

$$\begin{aligned} \text{Time} &= \frac{\text{Distance}}{\text{Speed}} \\ &= \frac{220}{20} \\ &= \mathbf{11 \text{ hrs}} \end{aligned}$$

43. The diagram below shows a swimming pool.



- a) What is the radius of the semi-circular end of the pool?

Answer: \_\_\_\_\_ (1)

- b) Calculate the distance around the swimming pool.

Answer: \_\_\_\_\_ (2)

- c) Lights are placed 7 m apart around the pool. How many lights are there?

Answer: \_\_\_\_\_ (2)

$$\begin{aligned} \text{(a) Radius} &= \frac{\text{Diameter}}{2} \\ &= \frac{14}{2} \\ &= 7\text{m} \end{aligned}$$

$$\begin{aligned} \text{(b) Circumference} \\ \text{of semi-circle} &= \frac{1}{2} \{ D \times \pi \} \\ &= \frac{1}{2} \left\{ \frac{14}{1} \times \frac{22}{7} \right\} \\ &= 22\text{cm} \end{aligned}$$

Distance Around Pool=

$$\begin{aligned} &24+14+24+22 \\ &= 84\text{m} \end{aligned}$$

$$\begin{aligned} \text{(c) Lights} &= 84 \div 7 \\ &= 12 \text{ lights} \end{aligned}$$

44.

The incomplete table shows the items Vikash bought at the candy shop.

Candy	Amount	Unit Cost	Total Cost
Candy Canes	3 boxes		\$24.00
Gummy Bears	$3\frac{1}{2}$ kg	\$7.00 per kg	
Lollipops		\$18.00 per dozen	\$ 9.00
Total Cost			\$57.50

a) Complete the table above by placing the **THREE** missing values.  
Answer: \_\_\_\_\_ (3)

b) The lollipops Vikash bought were for 3 children. How much will lollipops for 21 children cost?  
Answer: \_\_\_\_\_ (2)

(a)

$$\text{Candy Canes} = \$ 24 \div 3 \\ = \$ 8$$

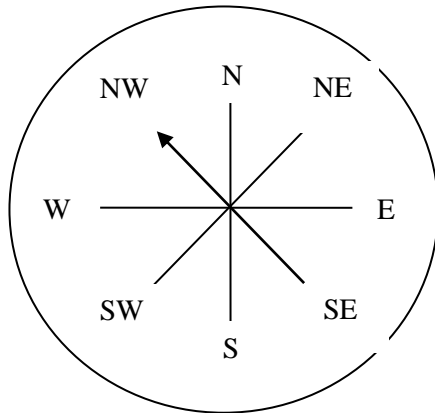
$$\text{Gummy Bears} = \$ 7 \times 3.5 \\ = \$ 24.50$$

$$\text{Lollipops} = \frac{\$ 9}{\$ 18} \\ = \frac{1}{2} \text{ kg}$$

$$\begin{aligned} \text{(c) } 3 \text{ children} &= \$ 9 \\ 1 \text{ child} &= \$ 3 (\$ 9 \div 3) \\ 21 \text{ children} &= \$ 3 \times 21 \\ &= \$ 63 \end{aligned}$$

45.	<p>Rajiv works at an ice-cream shop for 6 hours each day for 5 days per week. He is paid regular time at \$15.00 per hour. Last week he earned \$590.00 which included overtime pay at \$20.00 per hour.</p> <p>Calculate:</p> <p>(a) His regular wage for the week. Answer:_____ (2)</p> <p>(b) How much money he received in overtime pay. Answer:_____ (1)</p> <p>(c) The number of overtime hours Rajiv worked last week. Answer:_____ (2)</p>	<p>(a) 1 day = 6 x \$15 = \$ 90 5 days = \$ 90 x 5 = \$ <b>450</b></p> <p>(b) Overtime = \$ 590 - \$ 450 = \$ <b>140</b></p> <p>(c) Overtime Hours = <math>\frac{\\$ 140}{\\$ 20}</math> = <b>7 hours</b></p>	
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46. The diagram below shows a compass.



a) In what direction is the compass pointing?

Answer: \_\_\_\_\_ (1)

b) Name the direction that is exactly **HALF** turn away?

Answer: \_\_\_\_\_ (1)

c) The compass makes a  $\frac{3}{4}$  turn in a **CLOCKWISE** direction. In what direction does it now point?

Answer: \_\_\_\_\_ (3)

(a) **NW**

(b) **SE**

(c) **SW**

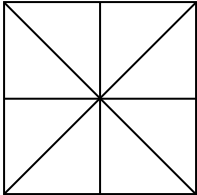
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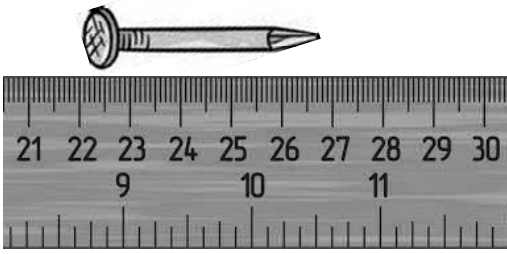
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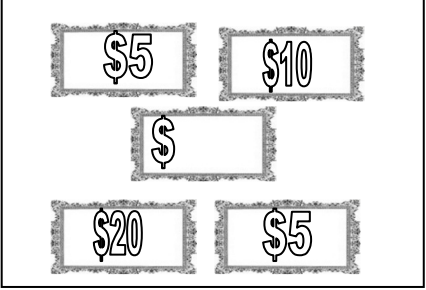
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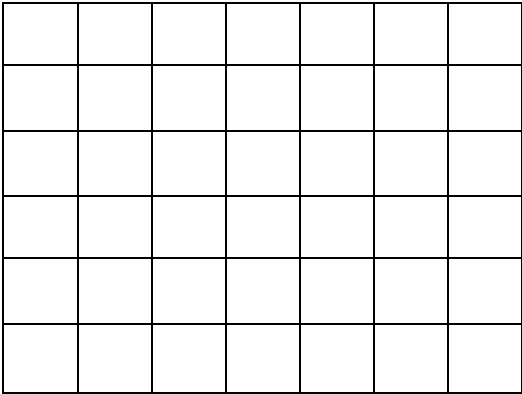
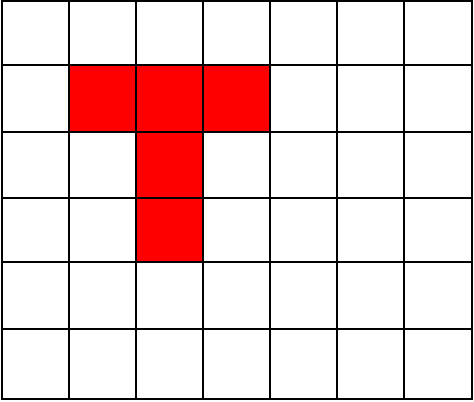

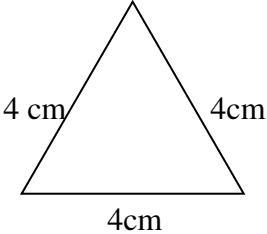
## SECTION 1

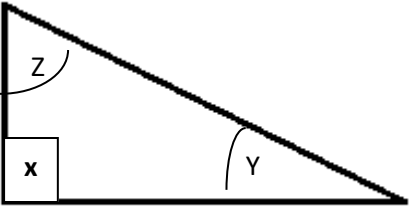
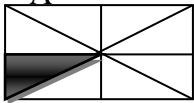
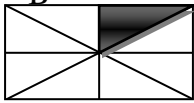
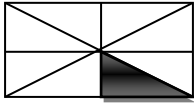
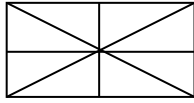

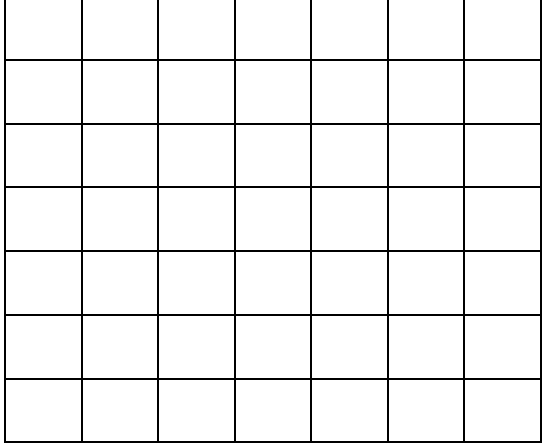
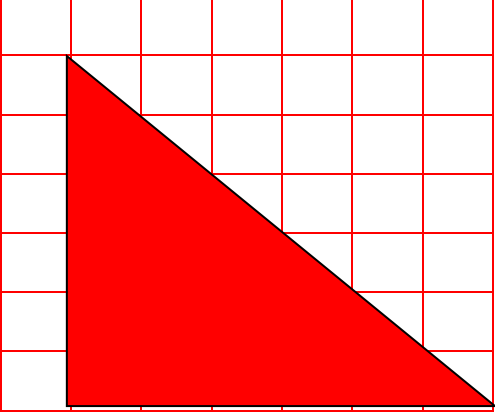
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Marks
1.	Express $\frac{4}{5}$ as a decimal fraction.  Answer:_____	<b>0.8</b>	
2.	<p>○ and □ represent two numbers</p> <p>If ○ x ○ = 36</p> <p>And ○ + □ = 15</p> <p>What is the value of □ ?</p> <p>Answer:_____</p>	<p>○ x ○ = 36</p> <p>○ = 6</p> <p>6 + □ = 15</p> <p>□ = 15 - 6</p> <p>□ = 9</p>	
3.	<p>A square cake is cut into 8 equal slices as shown below.</p>  <p>How many similar slices can be obtained from 3 <math>\frac{1}{4}</math> identical cakes?</p> <p>Answer:_____</p>	<p>1 cake = 8 slices</p> <p><math>3\frac{1}{4}</math> cakes = <math>\frac{8}{1} \times \frac{7}{2}</math></p> <p>= 28 slices</p>	
4.	<p>Write the numeral which represents:</p> <p><math>(4 \times 10,000) + (6 \times 1000) + (8 \times 10) + (1 \times 1)</math></p> <p>Answer:_____</p>	<b>46081</b>	

5.	Sam sold 25 stamps. He had 45 stamps left. How many stamps had Sam at first?  Answer:_____	$\text{Total} = 25 + 45$ $= \mathbf{70 \text{ stamps}}$	
6.	Mark weighs 45.35kg and Joe weighs 30.6kg. How much heavier is Mark than Joe?  Answer:_____	$\text{Mark} = 45.35 -$ $\underline{30.60}$ $\underline{14.75}$ $\mathbf{14.75 \text{ kg heavier}}$	
7.	Calculate $364 \times 25$  Answer:_____	$\mathbf{9100}$	
8.	Express $5\frac{5}{8}$ as a percent.  Answer:_____	$\frac{5}{8-2} \times \frac{100-25}{1} = \frac{125}{2}$ $= \mathbf{62\frac{1}{2} \% \text{ or } 62.5 \%}$	
9.	$3\frac{1}{4}$ kilometres = _____ metres.  Answer:_____	$\mathbf{3250 \text{ m}}$	
10.	What is the length of the nail?   Answer:_____cm	$\mathbf{5\text{cm}}$	

11.	 <p>Ram has \$60.00. What is the value of the unmarked bill?</p> <p>Answer: _____</p>	<p>Marked Bills = 5 + 10 + 20 + 5 = \$40</p> <p>Total = \$60</p> <p>Unmarked Bill = \$60 - \$40 = \$ 20</p>	
12.	<p>Sunita left home at 10:20 am and reached the mall 1 hour and 40 minutes later. At what time did Sunita arrive at the mall?</p> <p>Answer: _____</p>	$\begin{array}{r} 10:20 \\ + 1:40 \\ \hline 11:60 \\ = 12:00 \end{array}$ <p><b>12:00 noon</b></p>	
13.	<p>A stove costs \$1500.00 without VAT. Calculate how much VAT a customer will pay if VAT is charged at 15% of the cost of the article.</p> <p>Answer: _____</p>	<p>C.P = \$ 1500</p> $\text{VAT} = \frac{15}{100} \times \frac{1500}{1}$ <p><b>= \$225</b></p>	
14.	<p>Ram ran 100 metres in 10.03 seconds while Paul ran it in 10.13 seconds. Who ran faster?</p> <p>Answer: _____</p>	<p><b>Ram ( 10.03 &lt; 10.13)</b></p>	

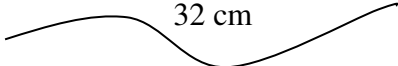



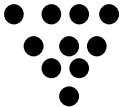



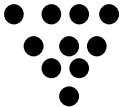
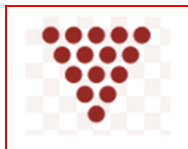



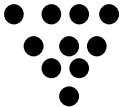
15.	<p>Draw the net of a cube on the grid given below.</p>  <p>1 cm Grid</p>		
16.	 <p>The clock shown above is twenty minutes slow. What is the correct time?</p> <p>Answer: _____</p>	<p><b>10:15</b></p>	
17.	 <p>Name the type of triangle shown.</p> <p>Answer: _____</p>	<p><b>Equilateral Triangle</b></p>	



18.	 <p>Arrange the angles in the triangle above in an ascending order.</p> <p>Answer:_____</p>	<p><b>X Z Y</b></p>	
19.	<p>Shade the appropriate section in D to continue the pattern below.</p> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <p><b>A</b></p>  </div> <div style="width: 50%;"> <p><b>B</b></p>  </div> <div style="width: 50%;"> <p><b>C</b></p>  </div> <div style="width: 50%;"> <p><b>D</b></p>  </div> </div>		
20	<p>On the grid below, draw an isosceles triangle with a base of six centimeters.</p>  <p style="text-align: center;">1 cm grid</p>		

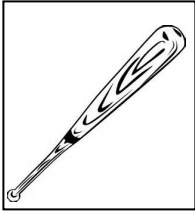


## SECTION 2

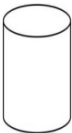
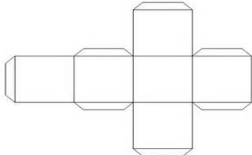
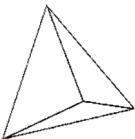
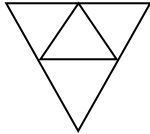
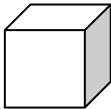
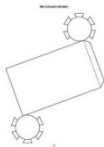
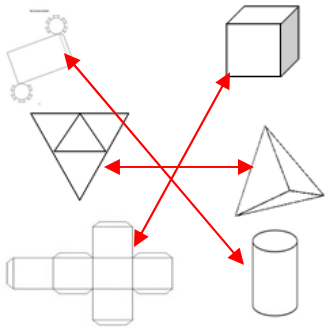
**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	ITEMS	Working Column	
21	<p>Calculate: <math>4\frac{3}{5} + 5\frac{2}{3}</math></p> <p>Answer: _____(2)</p>	$4\frac{3}{5} + 5\frac{2}{3}$ $\underline{99 + 10} = 9\frac{19}{15}$ $\frac{15}{15}$ $= 10\frac{4}{15}$	
22.	<p>Mary gave John <math>\frac{2}{5}</math> of her stamp and Sita <math>\frac{1}{3}</math> of her stamps. What fraction of her stamps is left?</p> <p>Answer: _____(2)</p>	$\text{Gave} = \frac{2}{5} + \frac{1}{3}$ $\underline{6 + 5}$ $15$ $= \frac{11}{15}$ $\text{Left with} = \frac{4}{15}$	
23.	<p>If <math>\frac{5}{9}</math> of a school's population is 405 pupils, what is the population of the school?</p> <p>Answer: _____(2)</p>	$\frac{5}{9} = 405$ $1 = \frac{405}{1} \times \frac{9}{5}$ $= 729 \text{ pupils}$	
24.	<p>Sam spent 0.35 of his money to buy a gift and saved the rest.</p> <p>(i) What fraction of his money did he save?</p> <p>Answer: _____(1)</p> <p>(ii) If Sam had \$140.00, at first, how much did the gift cost him?</p> <p>Answer: _____(2)</p>	<p>(a) <math>1.00 - 0.35 = 0.65</math></p> $0.65 = \frac{65}{100}$ $\frac{65}{100} = \frac{13}{20}$ $\text{Save} = \frac{13}{20}$ <p>(b) <math>\text{Gift} = \frac{7}{20} \times \frac{140}{1}</math></p> $= \$ 49$	

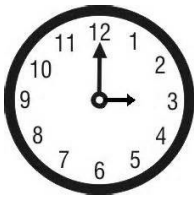
25.	<p>Re- arrange the 2, 3, 5 and 4 to form</p> <p>(a) The largest 4-digit number.</p> <p>Answer: _____(1)</p> <p>(b) The smallest 4 digit number that is exactly divisible by 4.</p> <p>Answer: _____(2)</p>	<p>(a) <b>5432</b></p> <p>(b) <b>3452</b></p>					
26.	<p>Harry uses the piece of string shown to make a square.</p> <p></p> <p>(a) What is the length of one side of the square?</p> <p>Answer: _____ (1)</p> <p>(b) What is the area of the square that Harry made?</p> <p>Answer: _____ (2)</p>	<p>(a) Perimeter of square = 32cm Side = <math>32 \div 4</math> = <b>8cm</b></p> <p>(b) Area of Square = <math>S \times S</math> = <math>8 \times 8</math> = <b>64 cm<sup>2</sup></b></p>					
27.	<p>(a) Complete the pattern sequence below for the 5<sup>th</sup> box.(1)</p> <table><tr><td></td><td></td><td></td><td></td><td></td></tr></table> <p>(b)How many dots are needed to make the 7<sup>th</sup> pattern?</p> <p>Answer: _____(2)</p>						<p>(a) </p> <p>(b) <b>28 dots</b></p>
							

28.	<p>A die has one of its faces painted red, two faces white and three faces in green. When the die is thrown, points are awarded according to the colour shown when the die stops.</p> <table><tr><th>Colour</th><th>Points</th></tr><tr><td>Red</td><td>15</td></tr><tr><td>Green</td><td>10</td></tr><tr><td>White</td><td>5</td></tr></table> <p>(a) Carla threw the die three times and got 2 red and 1 white. How many points did she earn?</p> <p>Answer: _____(1)</p> <p>(b) Boyo earned 60 points in the game. Complete the table below to show how many times he got a white when threw the die.</p> <table><tr><th>Colour</th><th>Number of throws</th></tr><tr><td>Red</td><td>1</td></tr><tr><td>Green</td><td>2</td></tr><tr><td>white</td><td></td></tr></table> <p>Answer: _____ (2)</p>	Colour	Points	Red	15	Green	10	White	5	Colour	Number of throws	Red	1	Green	2	white		<p>(a) Carla = <math>(15 \times 2) + (1 \times 5)</math> = 30 + 5 = <b>35 points</b></p> <p>(b) Boyo = 60 points = <math>(1 \times 15) + (2 \times 10)</math> = 15 + 20 = 35</p> <p>White = <math>(60 - 35) \div 5</math> = <math>25 \div 5</math> = <b>5 times</b></p>
Colour	Points																	
Red	15																	
Green	10																	
White	5																	
Colour	Number of throws																	
Red	1																	
Green	2																	
white																		
29.	<p>Laura left home at the time shown on the clock. She arrived at the mall 25 minutes later.</p> <div></div> <p>(a) On the same clock, indicate the time she arrived at the mall. Answer: _____(1)</p> <p>(b) Through what angle, in degrees, did the minute hand move? Answer: _____(1)</p>	<p>(a) </p> <p>(b) 1 space = <math>30^0</math> 5 spaces = <math>30^0 \times 5</math> = <b><math>150^0</math></b></p>																

30.	<p>At the factory where Mr. Jerome works, he is paid \$40.00 per hour for work up to 30 hours for the week and time and a half for overtime work. Last week, Mr. Jerome worked 45 hours. What should be his pay for last week's work?</p> <p>Answer: _____ (3)</p>	<p>Normal time = 30 hrs x \$40 = \$1200</p> <p>Overtime hours = 45 – 30 = 15 hours</p> <p>Time and a half = <math>1\frac{1}{2}</math> or <math>\frac{3}{2}</math> = <math>\frac{3}{2} \times \frac{40}{1}</math> = \$60</p> <p>Mr. Jerome's overtime = \$60 x 15 = \$900</p> <p>Total Pay = \$ 1200 + \$ 900 = <b>\$ 2100</b></p>	
31.	<p>The drawings below show the cost of three items.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>\$75.00</p>  <p>Bat</p> </div> <div style="text-align: center;"> <p>\$35.00</p>  <p>Cricket Ball</p> </div> <div style="text-align: center;"> <p>\$60.00</p>  <p>Football</p> </div> </div> <p>(a) Joel has \$300.00. How much does Joel pay for 1 bat and 2 footballs?</p> <p>Answer: _____ (1)</p> <p>(b) How many cricket balls can Joel purchase with the REMAINING money?</p> <p>Answer: _____ (2)</p>	<p>(a) Joel pays = \$ 75 + (2 x \$ 60) = \$ 75 + \$ 120 = <b>\$195</b></p> <p>(b) Remained with = \$300 - \$195 = \$105</p> <p>Cricket balls = \$105 ÷ 35 = <b>3 cricket balls</b></p>	

32.	<p>Draw lines to match the following nets to their solids.</p> <div></div> <p>(3)</p>																
33.	<p>Complete Chin's Company pay sheet below for three employees.</p> <table><thead><tr><th>Name</th><th>Rate of Pay</th><th>Wages</th></tr></thead><tbody><tr><td>Lee</td><td>5 days wages at \$90/day</td><td>\$ <input type="text"/></td></tr><tr><td>Yong</td><td><input type="text"/> days wages at \$60/day</td><td>\$180.00</td></tr><tr><td>Ling</td><td>6 days wages at \$ <input type="text"/> \ day</td><td>\$480.00</td></tr><tr><td></td><td>TOTAL</td><td>\$1110.00</td></tr></tbody></table> <p>Answer: _____(3)</p>	Name	Rate of Pay	Wages	Lee	5 days wages at \$90/day	\$ <input type="text"/>	Yong	<input type="text"/> days wages at \$60/day	\$180.00	Ling	6 days wages at \$ <input type="text"/> \ day	\$480.00		TOTAL	\$1110.00	<p>5 days wages = \$90 x 5 = \$ 450</p> <p>\$ 180 ÷ \$ 60 = 3 days</p> <p>\$ 480 ÷ 6 = \$ 80</p>
Name	Rate of Pay	Wages															
Lee	5 days wages at \$90/day	\$ <input type="text"/>															
Yong	<input type="text"/> days wages at \$60/day	\$180.00															
Ling	6 days wages at \$ <input type="text"/> \ day	\$480.00															
	TOTAL	\$1110.00															

34. The clocks below show the starting time of three plays at different theatres.



A



B



C

- (a) How many minutes after the start of each play does the next play begin?

Answer:

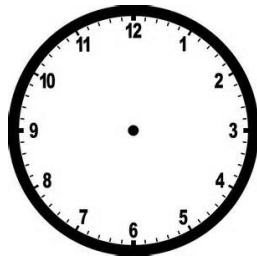
\_\_\_\_\_ (1)

- (b) At what time does the fifth play start?

Answer:

\_\_\_\_\_ (1)

- (c) Draw the starting time of the 5<sup>th</sup> play on the clock below. (1)



(a) **45 minutes**


(b) 4<sup>th</sup> play = 5:15

5<sup>th</sup> play = 6:00

(c)



35.



5 for \$7.00

Mangoes are sold as shown above.  
(a) How much would a customer pay for 15 mangoes?  
  
Answer: \_\_\_\_\_(1)  
  
(b) How many mangoes can the customer buy with \$49.00?  
  
Answer: \_\_\_\_\_(1)

(a) 5 mangoes = \$ 7  
1 mango =  $\frac{7}{5}$   
15 mangoes =  $\frac{7}{5} \times \frac{15}{1}$   
= \$ 21

(b) \$ 7 = 5 mangoes  
\$1 =  $\frac{5}{7}$   
\$ 49 =  $\frac{5}{7} \times \frac{49}{1}$   
= 35 mangoes

36

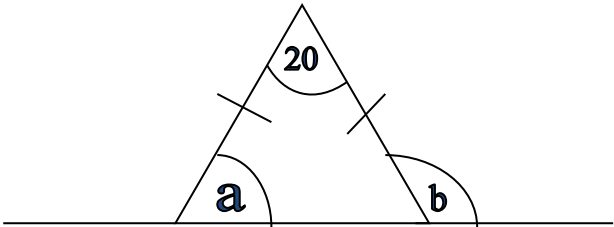
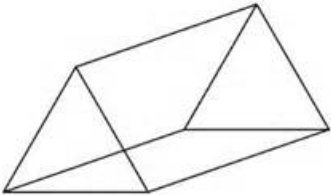

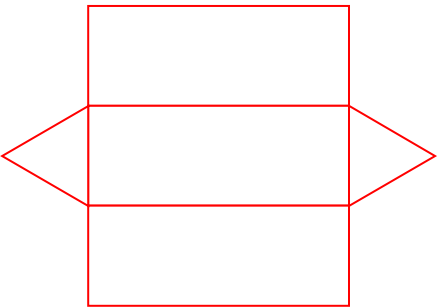
Harry and his wife went to a restaurant for dinner. At the end of their meal they received the bill below. VAT is charged at 15%.

ITEM	PRICE
1 portion of shrimps	\$70.00
2 portions of chicken	\$80.00
1 portion of fried rice	\$30.00
1 portion chunky vegetables	\$30.00
2 soft drinks	\$30.00
SUB TOTAL	
15% VAT	
TOTAL	

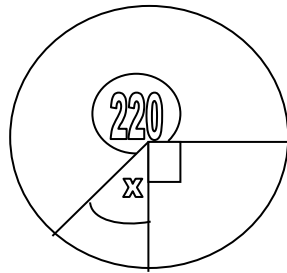
(a) Calculate the cost of the meal before VAT was charged.  
Answer: \_\_\_\_\_(1)  
  
(b) Calculate the cost of the meal after VAT was charged  
Answer: \_\_\_\_\_(1)

(a) Meal before VAT  
= \$70 + \$80 + \$30 + \$30 + \$30  
= \$ 240

(b) VAT =  $\frac{15}{100} \times \frac{240}{1}$   
= \$ 36  
  
Meal After VAT = \$ 240 + \$ 36  
= \$276

37.	 <p>Find the value of :</p> <p>a) Angle a.</p> <p>Answer: _____(1)</p> <p>b) Angle b</p> <p>Answer: _____(1)</p>	<p>(a) <math>a^\circ = 180^\circ - 20^\circ</math></p> <p><math>= \frac{160^\circ}{2}</math></p> <p><math>= 80^\circ</math></p> <p>(b) <math>b^\circ = 180^\circ - 80^\circ</math></p> <p><math>= 100^\circ</math></p>	
38	 <p>a) What is the name of the solid above?</p> <p>Answer: _____(1)</p> <p>b) Complete the net of the solid above.</p> 	<p>(a) <b>Triangular Prism</b></p> <p>(b)</p> 	

39.



In the circle above, state

(a) The value of angle x in degrees.

Answer:

\_\_\_\_\_ (1)

(b) The type of angle formed at x

Answer:

\_\_\_\_\_ (1)

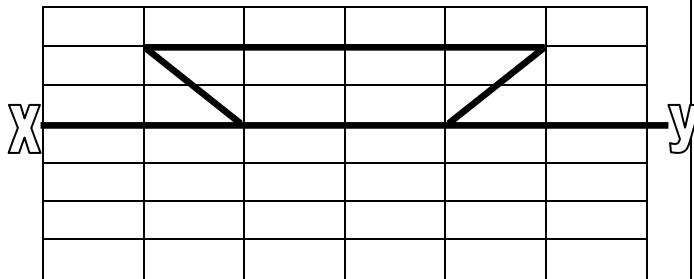
$$\begin{aligned} \text{(a) } X^{\circ} &= 360^{\circ} - (220^{\circ} + 90^{\circ}) \\ X^{\circ} &= 360^{\circ} - 310^{\circ} \\ X^{\circ} &= 50^{\circ} \end{aligned}$$

**(b) Acute Angle**

40. XY is a mirror line.

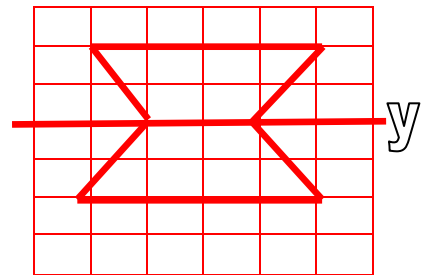
(a) Draw the reflection of the figure shown

(b) Draw another line of symmetry on the combined shape formed



Answer:

\_\_\_\_\_ (2)



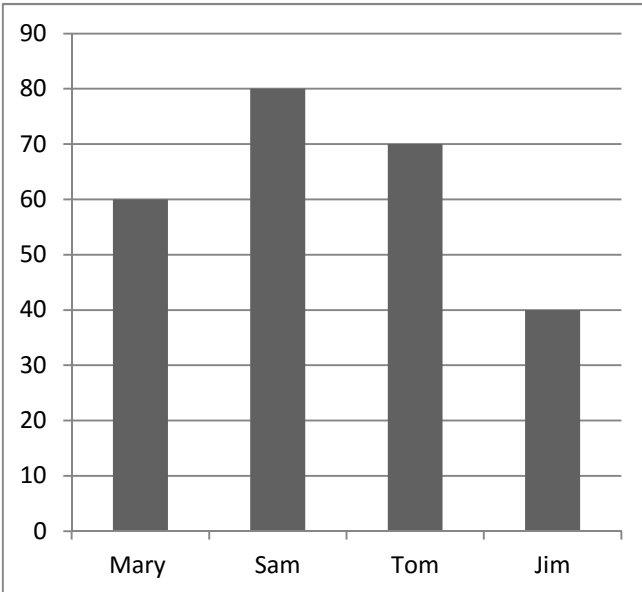
### SECTION 3

**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column**

NO	ITEMS	WORKING COLUMN	
41	<p>In a cricket match between two schools, School A scored 200 runs while School B scored 195 runs.</p> <p>(a) What is the total number of runs scored by both teams?</p> <p>Answer: _____ (1)</p> <p>(b) What is the mean number of runs scored by the two teams?</p> <p>Answer: _____ (2)</p> <p>(c) Kyle, who was a member of School A's team, scored 45 runs. What percent of his team's total score did Kyle score?</p> <p>Answer: _____ (2)</p>	<p>(a) Total runs = <math>200 + 195</math> = <b>395 runs</b></p> <p>(b) Mean = <math>\frac{395}{2}</math> = <b>197.5 runs</b></p> <p>(c) Percentage of total score = <math>\frac{45}{200} \times \frac{100}{1}</math> = <b>22.5%</b></p>	
42.	<p>Mrs. Laura wants to tile her living room floor, which measures 12 metres by 9 metres with square tiles of sides 30 centimetres.</p> <p>(a) What is the area of one of the tiles?</p> <p>Answer: _____ (1)</p> <p>(b) How many tiles would Mrs. Laura have to buy to cover the whole floor?</p> <p>Answer: _____ (2)</p> <p>(c) What will be the cost to tile the floor if one tile costs \$9.00 and labour was charged at \$2.00 per tile?</p> <p>Answer: _____ (2)</p>	<p>(a) Area of tile = <math>30 \times 30</math> = 900 tiles</p> <p>(b) Floor = 12m = 1200cm = 9m = 900cm</p> <p>(c) Tiles needed = <math>\frac{1200^{40} \times 900^{30}}{30_1 \times 30_1}</math> = <b>1200 tiles</b></p> <p>(d) 1 tile = \$11 ( \$9 + \$2) 1200 tiles = \$ 11 x 1200 = <b>\$13 200</b></p>	

43.	<p>The cost price of a television set is \$6400 and the selling price is \$8000. Calculate</p> <p>(a) The profit Answer: _____(1)</p> <p>(b) The percent profit? Answer: _____(1)</p> <p>(c) A discount of 20% is given on the selling price. What is the value of the discount? Answer: _____(1)</p> <p>(d) The customer has to pay 15% Vat on the sale price. How much did the television set finally cost him? Answer: _____(2)</p>	<p>(a) Profit = S.P – C.P = \$ 8000 - \$ 6400 = <b>\$ 1600</b></p> <p>(b) Percentage Profit <math display="block">= \frac{1600}{6400} \times \frac{100}{1}</math> = <b>25%</b></p> <p>(c) Discount = <math>\frac{20}{100} \times \frac{8000}{1}</math> = <b>\$ 1600</b></p> <p>(d) S.P = \$ 8000 - \$ 1600 = \$ 6400</p> <p>Final cost = 115% x \$ 6400 <math display="block">= \frac{115}{100} \times \frac{6400}{1}</math> = <b>\$ 7360</b></p>	
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44.	<p>A farmer harvested 640 carrots from his garden. He threw away 10% which was spoilt, gave his neighbours <math>\frac{1}{4}</math> of the remainder and then sold the rest. Calculate the number of carrots:</p> <p>(a) He threw away</p> <p>Answer: _____ (1)</p> <p>(b) He gave the neighbours</p> <p>Answer: _____ (2)</p> <p>(c) He sold</p> <p>Answer: _____ (2)</p>	<p>(a) Harvested = 640 carrots  Spoilt = <math>\frac{10}{100} \times \frac{640}{1}</math>  = <b>64 carrots</b></p> <p>(b) Remainder = 640 – 64  = 576  Neighbours = <math>\frac{1}{4} \times \frac{576}{1}</math>  = <b>144 carrots</b></p> <p>(c) Sold = 640 – (64 + 144)  = 640 – 208  = <b>432 carrots</b></p>	
45.	<p>Jack borrowed \$10,000.00 for 5 years at an interest rate of 8% per annum from a bank.</p> <p>Calculate:</p> <p>a) The simple interest for one year</p> <p>Answer: _____ (2)</p> <p>b) The simple interest for five years</p> <p>Answer: _____ (1)</p> <p>c) The amount he has to repay after five years.</p> <p>Answer: _____ (1)</p> <p>d) His monthly installments to the nearest dollar</p> <p>Answer: _____ (1)</p>	<p>(a) <math>S.I = \frac{P \times R \times T}{100}</math>  = <math>\frac{10\,000 \times 1 \times 8}{100}</math>  = <b>\$ 800</b></p> <p>(b) Five Years = \$ 800 x 5  = <b>\$ 4 000</b></p> <p>(c) Amount = \$ 10 000 + \$ 4000  = <b>\$ 14 000</b></p> <p>(d) Monthly Installments = <math>12 \times 5</math>  = 60 months</p> <p>M. I = <math>\frac{\text{Amount}}{\text{No. of mths}}</math>  = <math>\frac{\\$ 14\,000}{60}</math>  = \$ 233.33  = <b>\$233 (to nearest dollar)</b></p>	

46	<p>The bar chart below shows four children's scores in a Mathematics test.</p>  <p>(a) Which child scored 70 marks?</p> <p>Answer: _____(1)</p> <p>(b) What is the difference between the highest and the lowest scores?</p> <p>Answer: _____(1)</p> <p>(c) What is the SUM of the children's scores?</p> <p>Answer: _____(1)</p> <p>(d) What is the mean score of the four pupils?</p> <p>Answer: _____(1)</p> <p>(e) What fraction of the total score is Tom?</p> <p>Answer: _____(1)</p>	<p>(a) <b>Tom</b></p> <p>(b) Difference = <math>80 - 40</math></p> <p style="text-align: right;"><b>= 40 marks</b></p> <p>(c) Sum of Scores = <math>60 + 80 + 70 + 40</math> <b>= 250 marks</b></p> <p>(d) Mean = <math>\frac{250}{4}</math> <b>= 62.5 marks</b></p> <p>(e) Tom = <math>\frac{70}{250}</math></p> <p style="text-align: right;"><b>= <math>\frac{7}{25}</math></b></p>
	<b>End of Test 3</b>	

# TEST

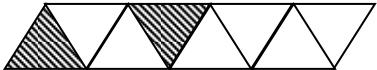
# 4

# MATHEMATICS TEST 4

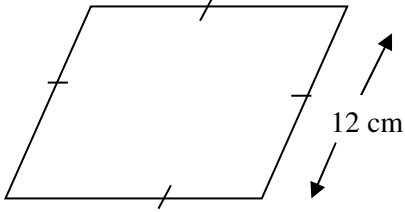
# TIME- 75 MINUTES



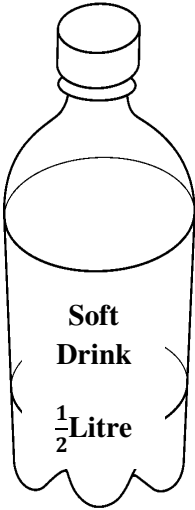
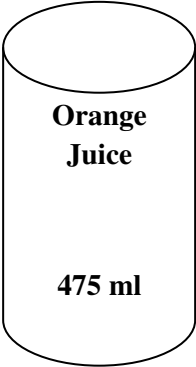
## SECTION 1

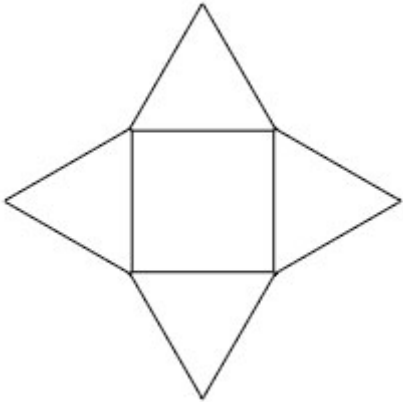
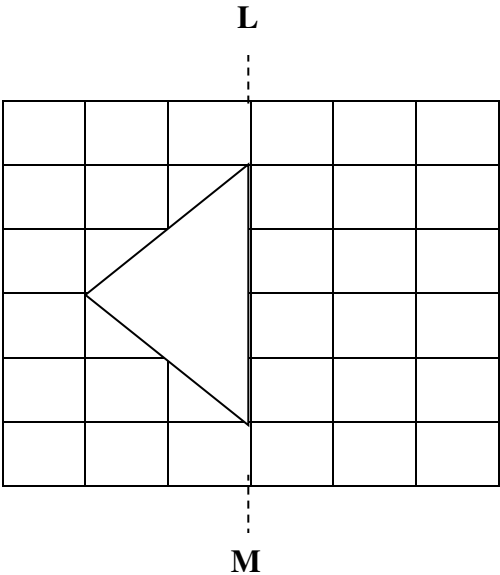
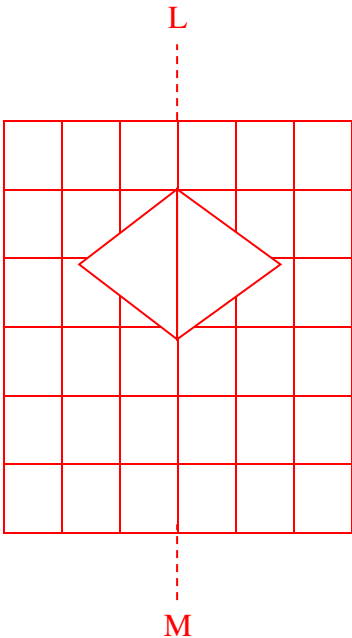
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Marks
1.	<b>SUBTRACT:</b> $\begin{array}{r} 947 \\ - 504 \\ \hline \end{array}$ Answer: _____	443	
2.	<b>DIVIDE</b> $4 \overline{)416}$ Answer: _____	104	
3.	Write the numeral which represents $(4 \times 10\,000) + (9 \times 1000) + (8 \times 10) + (7 \times 1)$ Answer: _____	49 087	
4.	What FRACTION of the shape is shaded?  Answer: _____	$\frac{2}{8} = \frac{1}{4}$	

5.	Express $9\frac{2}{3}$ as an <b>IMPROPER</b> fraction.  Answer: _____	$\frac{29}{3}$								
6.	Tom has 160 mangoes. He sells $\frac{3}{8}$ of them.  How many mangoes does Tom sell?  Answer: _____	$\frac{3}{8} \times \frac{160}{1}$ $= 60$								
7.	Complete the sequence below. <table border="1"><tr><td>1</td><td>3</td><td>6</td><td>10</td><td>15</td><td>21</td><td></td></tr></table> Answer: _____	1	3	6	10	15	21		$21 + 7 = 28$	
1	3	6	10	15	21					
8.	Write the correct number in the circle to give the result shown. $14 \times 3 + \bigcirc = 54$  Answer: _____	$14 \times 3 + \bigcirc = 54$ $42 + \bigcirc = 54$ $\bigcirc = 12$								
9.	Anushka has a total of \$9.00 in her cash pan. If she only saves 25¢ coins, how many 25¢ coins does she have?  Answer: _____ coins	$\$1 = 4 \text{ } 25\text{c}$ $\$9 = 4 \times 9$ $= 36 \text{ } 25\text{c}$								

10.	<p>The <b>RHOMBUS</b> below has a side of length 12cm.</p>  <p>What is the perimeter of this shape?</p> <p>Answer: _____ cm</p>	$\begin{aligned} \text{Perimeter} &= 12 \times 4 \\ &= \mathbf{48\text{cm}} \end{aligned}$	
11.	<p>The area of a square is <math>169\text{ cm}^2</math>. Calculate the length of <b>ONE</b> of its sides.</p> <p>Answer: _____ cm</p>	$\begin{aligned} \text{Area of square} &= 169\text{cm}^2 \\ \text{Side} &= \sqrt{169} \\ &= \mathbf{13\text{cm}} \end{aligned}$	
12.	<p>Nafeeza's journey from Sangre Grande to Port-of-Spain took 165 minutes.</p> <p>How many hours did her journey take?</p> <p>Answer: _____ hours</p>	$\begin{aligned} &165 \div 60 \\ &= 2 \text{ hrs } \frac{45}{60} \text{ mins} \\ &= \mathbf{2 \frac{3}{4} \text{ hrs}} \end{aligned}$	
13.	<p>Mark has \$9.00. Pens are sold at \$2.75 each. What is the <b>GREATEST</b> number of pens that Mark can buy?</p> <p>Answer: _____ pens</p>	$\begin{aligned} &\$9.00 \div \$2.75 \\ &= \frac{900}{275} \\ &= \frac{36}{11} \\ &= \mathbf{3 \text{ pens}} \end{aligned}$	

<p>14.</p>	<p>Harry purchased 5 pears from Stall A and John purchased 5 pears from Stall B.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <div style="border: 1px solid black; padding: 10px; width: 100px;"> <p><b>Stall A</b></p> <p><b>5 for \$3.00</b></p> </div> </div> <div style="text-align: center;">  <div style="border: 1px solid black; padding: 10px; width: 100px;"> <p><b>Stall B</b></p> <p><b>5 for \$4.00</b></p> </div> </div> </div> <p>Who bought the pears at a cheaper rate?</p> <p>Answer: _____</p>	<p style="color: red;">Stall A = \$ 3 ÷ 5 1 pear = \$0.60</p> <p style="color: red;">Stall B = \$ 4 ÷ 5 1 pear = \$ 0.80</p> <p style="color: red;"><b>Stall A is cheaper ∴ Harry bought pears at a cheaper rate</b></p>	
<p>15.</p>	<p>Two containers are shown below. Which container holds more?</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><b>Soft Drink</b></p> <p><math>\frac{1}{2}</math> Litre</p> </div> <div style="text-align: center;">  <p><b>Orange Juice</b></p> <p>475 ml</p> </div> </div> <p>Answer: _____</p>	<p style="color: red;"><math>\frac{1}{2}</math> l = 500 ml</p> <p style="color: red;">Soft Drink = 500 ml Orange Juice – 475 ml</p> <p style="color: red;"><b>∴ Soft Drink holds more</b></p>	

16.	<p>What is the name of the solid that will be formed when the net below is folded?</p>  <p>Answer: _____</p>	<p><b>Square based pyramid</b></p>	
17.	<p>Complete the shape below so that LM is a line of symmetry.</p>  <p>Answer: _____</p>		

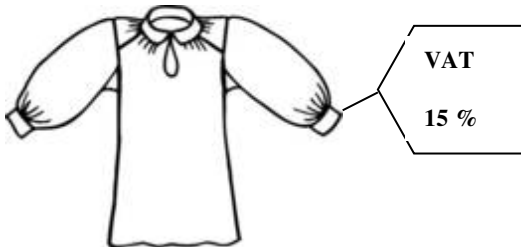


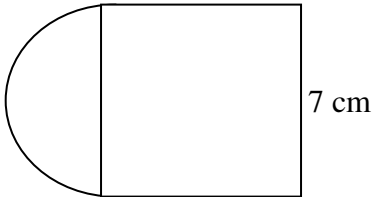
## SECTION 2

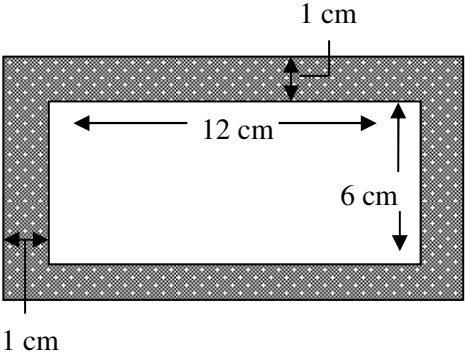
**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
21.	<p>How many pieces of rope of length 0.4 m can be cut from a piece 14.4 m long?</p> <p>Answer: _____ pieces (2)</p>	$14.4 \div 0.4$ $= 144 \div 4$ $= \mathbf{36 \text{ pieces}}$	
22.	<p><math>\frac{2}{5}</math> of a number is 60.</p> <p>What is <math>\frac{2}{3}</math> of the <b>SAME</b> number?</p> <p>Answer: _____ (2)</p>	$\frac{2}{5} = 60$ $1 = \frac{60}{1} \times \frac{5}{2}$ $= 150$ $\frac{2}{3} \times \frac{150}{1}$ $= \mathbf{100}$	
23.	<p>Arrange the following fractions from the <b>LARGEST</b> to the <b>SMALLEST</b>.</p> <p><math>\frac{5}{8}</math>, <math>\frac{2}{3}</math>, <math>\frac{3}{5}</math></p> <p>Answer: _____ (2)</p>	$\frac{5}{8} = 0.625 \quad \frac{2}{3} = 0.667 \quad \frac{3}{5} = 0.600$ $\therefore \text{Largest to Smallest} = \frac{2}{3} \quad \frac{5}{8} \quad \frac{3}{5}$	
24.	<p>What are the next two numbers in the sequence</p> <p>25, 36, 49, 64, _____, _____?</p> <p>Answer: _____ and _____ (2)</p>	<p><b>Squared Numbers</b></p> <p><b>81, 100</b></p>	

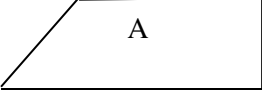
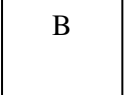
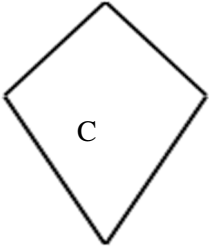
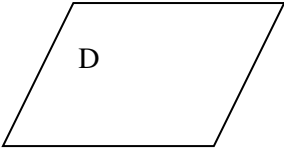
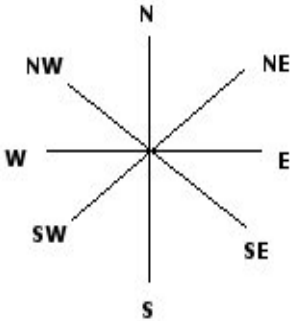
25.	<p>Pedro shared 120 marbles between his two friends, Deo and Tim, such that Tim got 14 less than Deo.</p> <p>a) How many marbles did Tim get?</p> <p>Answer: _____(2)</p> <p>b) How many marbles did Deo get?</p> <p>Answer: _____(1)</p>	$120 - 14$ $= 106$ $106 \div 2$ $= 53$ <p>(a) <b>Tim = 53 marbles</b></p> <p>(b) <b>Deo = 67 marbles ( 53 + 14)</b></p>	
26.	<p>Mrs. Susan buys some candies for children in a class. She fills 25 bags with 12 sweets each. She has 8 candies remaining.</p> <p>a) How many candies did Mrs. Susan purchase?</p> <p>Answer: _____ candies (2)</p> <p>b) How many bags could she fill if she puts 11 candies in <b>EACH</b> bag?</p> <p>Answer: _____ bags (1)</p>	<p>(a) <b>Purchased = (25 x 12) + 8</b></p> $= 300 + 8$ $= \mathbf{308 \text{ candies}}$ <p>(b) <math>308 \div 11</math></p> $= \mathbf{28 \text{ bags}}$	
27.	<p>A merchant bought 10 fans on Monday, 6 on Tuesday and 4 on Friday.</p> <p>a) Calculate the percent of fans he bought on Friday.</p> <p>Answer: _____ (2)</p> <p>b) If he sold all the fans he bought on Monday, what percent of the fans is he left with?</p> <p>Answer: _____ (1)</p>	<p>(a) <b>Total = 20fans</b></p> $\text{Friday} = \frac{4}{20} \times \frac{100}{1}$ $= \mathbf{20\%}$ <p>(b) <b>Left with = 10 fans</b></p> $\text{Percent left} = \frac{10}{20} \times \frac{100}{1}$ $= \mathbf{50\%}$	

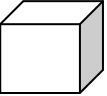
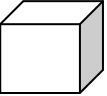
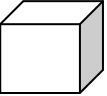
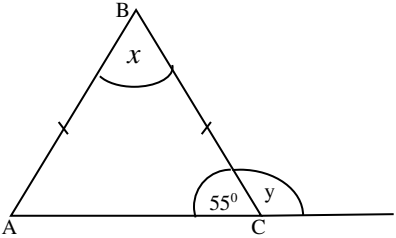
28.	<p>A cricket team earns 3 points for a win, 1 point for a draw and zero points for a loss.</p> <p>The table below shows the points earned by the team.</p> <table><tr><th>Results</th><th>Points</th></tr><tr><td>Win</td><td>18</td></tr><tr><td>Draw</td><td>5</td></tr><tr><td>Loss</td><td>0</td></tr></table> <p>The team played 15 matches. How many matches did the team lose?</p> <p>Answer: _____ matches (3)</p>	Results	Points	Win	18	Draw	5	Loss	0	<p>Win = <math>18 \div 3</math> = 6 matches</p> <p>Draw = <math>5 \div 1</math> = 5 matches</p> <p>Win + Draw = <math>6+5</math> = 11 matches</p> <p><math>\therefore</math> Lost = <math>15 - 11</math> = 4 matches</p>
Results	Points									
Win	18									
Draw	5									
Loss	0									
29.	<p>Sara buys the blouse below which is priced at \$180.00.</p> <div></div> <p>How much money does she pay for the blouse if VAT is charged at 15%?</p> <p>Answer: \$_____ (2)</p>	<p>VAT = 15%</p> <p>Paid = <math>\frac{115}{100} \times \frac{180}{1}</math></p> <p>= \$ 207</p>								

30.	<p>Alice left home for school at 7:15 a.m. She waited 10 minutes to get on the bus. If she arrived at 8:10 a.m., how long did the bus take to get to school?</p> <p>Answer: _____ (2)</p>	$\begin{array}{r} 7:15 \\ :10 \\ \hline 7:25 \end{array}$ $\begin{array}{r} 8:10 \\ -7:25 \\ \hline :45 \text{ minutes} \end{array}$	
31.	<p>The diagram shows a square joined to a semi-circle at one end.</p>  <p>Calculate the perimeter of the combined shape.</p> <p>Answer: _____ (2)</p>	<p>Circumference of semi-circle</p> $= \frac{1}{2} [D \times \pi]$ $= \frac{1}{2} \left[ \frac{7}{1} \times \frac{22}{7} \right]$ $= \frac{1}{2} \times \frac{22}{1}$ $= 11 \text{ cm}$ <p>Perimeter of combined shape</p> $= (7 \times 3) + 11$ $= 21 + 11$ $= \mathbf{32 \text{ cm}}$	

32.	<p>a) A picture is 12 cm long and 6 cm wide. What is the area of the picture?</p> <p>Answer: _____ cm<sup>2</sup> (1)</p> <p>b) There is a frame 1 cm wide around the picture as shown below.</p>  <p>Calculate the area of the frame.</p> <p>Answer: _____ cm<sup>2</sup> (2)</p>	<p>(a) Area of picture = <math>12 \times 6</math> = <b>72 cm<sup>2</sup></b></p> <p>(b) Area of larger rect. = <math>14 \times 8</math> = <b>112 cm<sup>2</sup></b></p> <p><math>\therefore</math> Area of picture frame = <math>112 - 72</math> = <b>40 cm<sup>2</sup></b></p>	
33.	<p>Eddy's allowance was \$80.00. Two fifths of his allowance is equal to <math>\frac{1}{2}</math> of Leo's allowance.</p> <p>a) How much is Leo's allowance?</p> <p>Answer: _____ (2)</p> <p>b) How much is <math>\frac{5}{8}</math> of Eddy's allowance?</p> <p>Answer: _____ (1)</p>	<p>(a) <math>\frac{2}{5} \times \frac{80}{1} = \\$ 32</math></p> <p><math>\frac{1}{2} = \\$ 32</math></p> <p><math>1 = \\$ 32 \times 2</math> <b>Leo's allowance = \$ 64</b></p> <p>(b) <math>\frac{5}{8} \times \frac{80}{1}</math> <b>= \$ 50</b></p>	

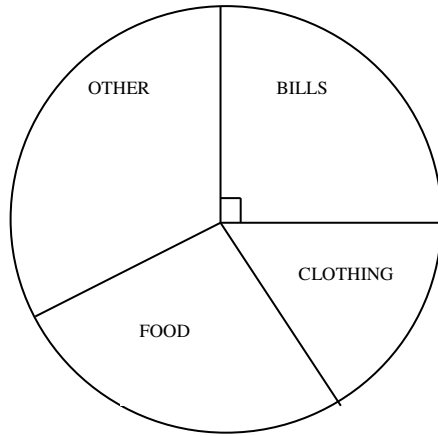
34.	<p>Larry borrowed \$5000.00 from the bank for a period of 3 years at a rate of 6% per annum.</p> <p>a) Calculate the interest that Larry must repay.</p> <p>Answer: \$_____ (2)</p> <p>b) How much money must Larry repay the bank at the end of 3 years?</p> <p>Answer: \$_____ (1)</p>	<p>(a) <math>S.I = \frac{P \times R \times T}{100}</math></p> <p><math>= \frac{5000 \times 6 \times 3}{100}</math></p> <p><b>= \$ 900</b></p> <p>(b) Amount = Principal + S.I</p> <p><math>= \\$ 5000 + \\$ 900</math></p> <p><b>= \$ 5 900</b></p>	
35.	<p>Paula's mother gave her \$3.00 for every \$10.00 she saved. Paula saved \$40.00.</p> <p>a) How much money does her mother have to give her?</p> <p>Answer: \$_____ (2)</p> <p>b) How much money would she have <b>ALTOGETHER?</b></p> <p>Answer: \$_____ (1)</p>	<p>(a) <math>(40 \div 10) \times 3</math></p> <p><math>= 4 \times 3</math></p> <p><b>∴ Paula's mother gave her \$12</b></p> <p>(b) Altogether</p> <p><math>= 40 + 12</math></p> <p><b>= \$ 52</b></p>	

36.	<p>Name the two quadrilaterals which have TWO pairs of parallel lines.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>A</p> <p>Trapezium</p> </div> <div style="text-align: center;">  <p>B</p> <p>Square</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 20px;"> <div style="text-align: center;">  <p>C</p> <p>Kite</p> </div> <div style="text-align: center;">  <p>D</p> <p>Parallelogram</p> </div> </div> <p>Answer: _____ (2)</p>	<p><b>Square and Parallelogram</b></p>	
37.	<p>Sally is facing NE. She turns in a clockwise direction to face SW.</p> <div style="text-align: center; margin: 20px 0;">  </div> <p>a) What fraction of a whole does Sally turn?</p> <p>Answer: _____ (1)</p> <p>b) How many MORE degrees must she turn in order to face West?</p> <p>Answer: _____ (1)</p>	<p>(a) <math>\frac{1}{2}</math> turn</p> <p>(b) 1 space = <math>360 \div 8</math> = <math>45^\circ</math></p> <p><b>Sally must turn <math>45^\circ</math> to face West</b></p>	

38.	<p>Complete the table below.</p> <table border="1" data-bbox="284 300 815 766"> <thead> <tr> <th>Diagram of Solid</th><th>Name of Solid</th><th>Number of Faces</th><th>Number of Corners</th></tr> </thead> <tbody> <tr> <td data-bbox="284 426 417 766">  </td><td data-bbox="417 426 550 766">(a)</td><td data-bbox="550 426 683 766">(b)</td><td data-bbox="683 426 815 766">(c)</td></tr> </tbody> </table> <p style="text-align: center;">(1)                      (1)                      (1)</p>	Diagram of Solid	Name of Solid	Number of Faces	Number of Corners		(a)	(b)	(c)	<p>a) <b>Cube</b></p> <p>b) <b>6 square faces</b></p> <p>c) <b>8 corners</b></p>	
Diagram of Solid	Name of Solid	Number of Faces	Number of Corners								
	(a)	(b)	(c)								
39.	<p>Study the diagram below and answer the questions that follow</p> <div style="text-align: center;">  </div> <p>a) Calculate the value of <math>x</math> and <math>y</math>.</p> <p>Answer: <math>x =</math> _____</p> <p><math>y =</math> _____</p> <p style="text-align: right;">(2)</p> <p>b) Circle the term which BEST describes the angle <math>x</math>.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> acute    obtuse    reflex </div> <p>Answer: _____ (1)</p>	<p>(a) <math>x^\circ = 180^\circ - 110^\circ (55^\circ + 55^\circ)</math>  <math>= 70^\circ</math>  <math>y^\circ = 180^\circ - 55^\circ</math>  <math>= 125^\circ</math></p> <p>(b) <b>Acute</b></p>									

40.

The pie chart below shows how Mr. John spends his salary for the month.



Calculate his monthly salary if he spends \$1200.00 on bills.

Answer: \$ \_\_\_\_\_ (2)

$$\frac{1}{4} = \$ 1\,200$$

$$1 = 1\,200 \times 4$$

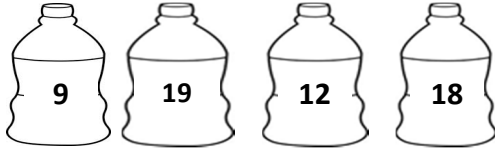
$$= \$ 4800$$

### SECTION 3

**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks															
41.	<p>Allan’s marks for the three subjects in an examination are shown on his report card below.</p> <p style="text-align: center;"><b>Allan’s Report</b></p> <table><tr><th>Subject</th><th>Maximum Marks</th><th>Marks Obtained</th></tr><tr><td>Composition</td><td>100</td><td>90</td></tr><tr><td>Mathematics</td><td>100</td><td>85</td></tr><tr><td>Language Arts</td><td>100</td><td>65</td></tr><tr><td><b>Total</b></td><td><b>300</b></td><td></td></tr></table> <p>a) Calculate the <b>TOTAL</b> marks Allan obtained for the examination.</p> <p>Answer:_____ (1)</p> <p>b) Express the total marks that Allan obtained as a percentage of the maximum marks for the test.</p> <p>Answer: _____% (2)</p> <p>c) How many <b>MORE</b> marks did Allan need in order to get 90% on the test?</p> <p>Answer: _____ (2)</p>	Subject	Maximum Marks	Marks Obtained	Composition	100	90	Mathematics	100	85	Language Arts	100	65	<b>Total</b>	<b>300</b>		<p>(a) Total Marks = 90 + 85 + 65 = <b>240 marks</b></p> <p>(b) Allan’s Percentage = <math>\frac{240}{300} \times \frac{100}{1}</math>  = <b>80%</b></p> <p>(c) 90% = 90 x 3 = 270 marks</p> <p>Difference = 270 – 240 = <b>30 more marks needed</b></p>	
Subject	Maximum Marks	Marks Obtained																
Composition	100	90																
Mathematics	100	85																
Language Arts	100	65																
<b>Total</b>	<b>300</b>																	

42. At a school bazaar, four bottles with numbers on them are lined up as shown below.



For every turn, a person is given three balls to knock down three bottles. The numbers are added and a prize is given for EXACT scores as shown on the table below.

Prize	Score
Phone	49
Wallet	46
Truck	40
Tea-set	39

- a) Kira knocks down three bottles marked 18, 9 and 12.

Which prize does she win?

Answer: \_\_\_\_\_ (1)

- b) Kira wants to win the wallet. Which THREE bottles should she knock down?

Answer: \_\_\_\_\_ (2)

- c) If Kira knocks down the bottle marked 9 as one of the three bottles, which prize will she NOT be able to win?

Answer: \_\_\_\_\_ (2)

$$(a) \text{ Kira won} = 18 + 9 + 12 \\ = 39 - \text{Tea-set}$$

$$(b) \text{ Wallet} = 19 + 18 + 9$$

$$(c) \begin{aligned} 9 + 19 + 12 &= \text{Phone} \\ 9 + 12 + 18 &= \text{Tea-set} \\ 9 + 19 + 18 &= \text{Wallet} \end{aligned}$$

**$\therefore$  She would not be able to win the TRUCK**

43. Complete Darren's shopping bill below.

(a)

(b)

(c)

Item	Quantity	Cost	Amount Paid
Crayons	3 boxes	\$5.00	<input type="text"/>
			(1)
Stickers	<input type="text"/>	25¢ each	<input type="text"/>
	(2)		(1)
<b>Total</b>			\$ 20.00
VAT		15%	<input type="text"/>
			(1)

Answer: \_\_\_\_\_

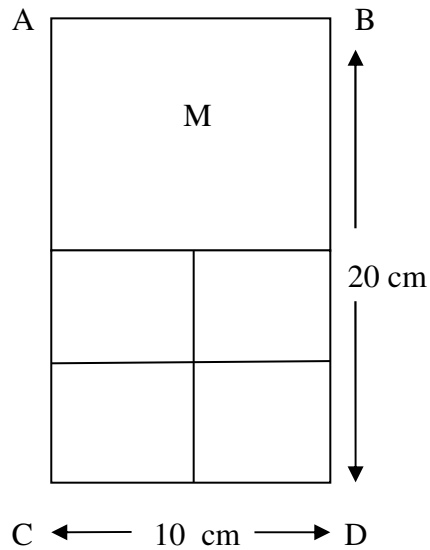
(a)  $3 \times 5 = \$ 15$

(b)  $\$20 - \$ 15 = \$5$

$\$ 5 \div .25 = 20 \text{ stickers}$

(c)  $\frac{15}{100} \times \frac{20}{1} = \$ 3$

44. The rectangle ABCD shown below is made up of square M and four other identical squares whose sum of areas is equal to the area of square M.



- a) What is the area of the square M ?

Answer: \_\_\_\_\_  $\text{cm}^2$

- b) Calculate the area of **ONE** of the four smaller squares.

Answer: \_\_\_\_\_  $\text{cm}^2$

- c) Calculate the perimeter of ABCD.

Answer: \_\_\_\_\_ cm

(a) Area of square M =  $10 \times 10$

=  **$100 \text{ cm}^2$**

(b) Area of smaller sq.=  $5 \times 5$

=  **$25 \text{ cm}^2$**

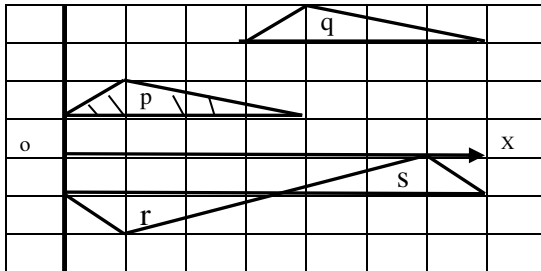
(c) Perimeter of ABCD

=  $[20 \times 2] + [10 \times 2]$

=  $40 + 20$

=  **$60 \text{ cm}$**

45. The shaded triangle at p is moved to various positions, q, r and s.



Describe CLEARLY the movements in EACH of the following:

a) p to q

Answer: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(2)

b) r to s

Answer: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

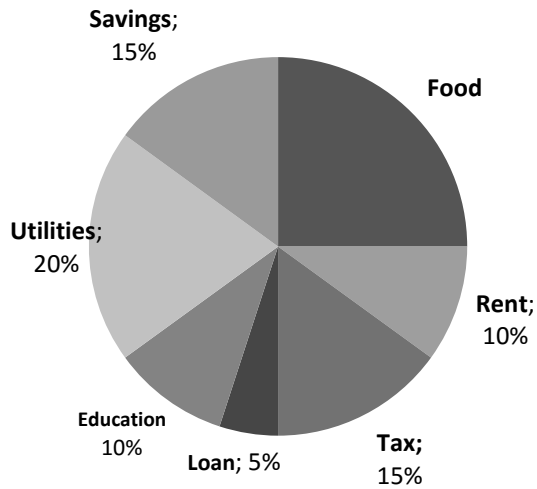
(3)

(a) SLIDE 3 units right, 2 units up

(b)  $\frac{1}{2}$  turn clockwise or  $180^\circ$  turn in a clockwise direction

46.

### Column1



The pie chart represents how Mr. Gary spent his monthly salary of \$12,000.00.

- a) Calculate the sum of money Mr. Gary spends on food.

Answer: \_\_\_\_\_ (2)

- b) Calculate the money spent on loans for a period of ONE YEAR.

Answer: \_\_\_\_\_ (2)

- c) What fraction of Mr. Gary salary is spent on utilities?

Answer: \_\_\_\_\_ (1)

$$(a) \text{ Food} = \frac{1}{4} \times \frac{12000}{1} = \$ 3000$$

$$(b) \text{ Loans} = 5\% \times 12000 = \$ 600/\text{mth}$$

$$12\text{mths} = 600 \times 12 = \$ 7\,200$$

$$(c) \text{ Utilities} = \frac{20}{100} = \frac{1}{5}$$

**END OF TEST 4**

# TEST

# 5

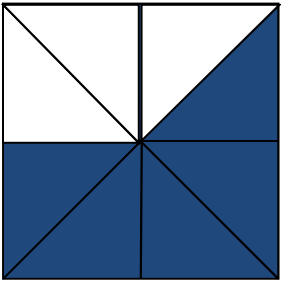
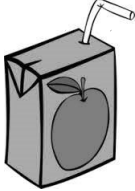
# MATHEMATICS TEST 5

# TIME- 75 MINUTES


## SECTION 1


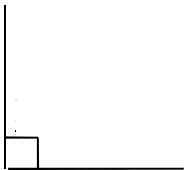
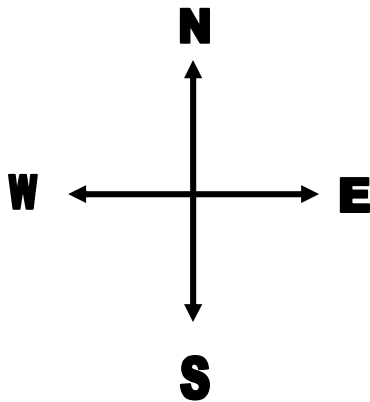
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

NO.	ITEMS	Working Column	Marks
1.	What is the PLACE VALUE of the digit 7 in the number 529.72?  Answer: _____	<b>TENTHS</b>	
2.	Write the numeral which represents $(9 \times 10000) + (6 \times 1000) + (4 \times 100) + (3 \times \frac{1}{100})$  Answer: _____	<b>96 400.03</b>	
3.	Express $4\frac{2}{5}$ as an IMPROPER fraction.  Answer: _____	$4\frac{2}{5} = \frac{22}{5}$	
4.	Convert 0.45 to a fraction in its <b>LOWEST</b> terms.  Answer: _____	$\frac{45}{100} = \frac{9}{20}$	
5.	What <b>percent</b> of 36 is 12?  Answer: _____	$\frac{12}{36} \times \frac{100}{1}$  $= 33\frac{1}{3} \%$	

6.	<p>What FRACTION of the diagram is NOT shaded?</p>  <p>Answer: _____</p>	$\frac{3}{8}$	
7.	<p>What must be added to <math>\sqrt{100}</math> to make <math>10^2</math>?</p> <p>Answer: _____</p>	$\begin{aligned}\sqrt{100} &= 10 \\ 10 + \square &= 100 \\ \square &= 100 - 10 \\ \square &= 90\end{aligned}$	
8.	<p>A pack of juice holds 250ml.</p>  <p>Joe drank 40% of the juice. How many ml of juice did he drink?</p> <p>Answer: _____ml</p>	$\begin{aligned}\text{Drank} &= \frac{40}{100} \times \frac{250}{1} \\ &= 100 \text{ ml}\end{aligned}$	

9.	<div data-bbox="418 226 659 363" data-label="Text"> <p><b>6:45 am</b></p> </div> <p>The clock above shows the time when Sunil got up to get ready for school. Show this time on the clock below.</p> <div data-bbox="418 506 651 737" data-label="Image"> </div>	<div data-bbox="987 453 1206 684" data-label="Image"> </div>	
10.	<div data-bbox="289 846 813 1073" data-label="Image"> </div> <p>Centimetre (cm) ruler</p> <p>The length of the pencil is EXACTLY _____ cm.</p>	<p><b>5.5 cm</b></p>	
11.	<div data-bbox="337 1388 760 1591" data-label="Image"> </div> <p>40cm<sup>3</sup>      920cm<sup>3</sup></p> <p>How many mini toy boxes will fill the larger toy box?</p> <p>Answer: _____</p>	<p><math>\frac{920\text{cm}^3}{40\text{cm}^3}</math></p> <p><b>= 23 mini boxes</b></p>	

12.	<p>The perimeter of a Rhombus is 48cm. What is the length of ONE side?</p> <p>Answer: _____cm.</p>	<p>Perimeter of Rhombus = <math>48 \div 4</math> = <b>12cm</b></p>	
13.	<p>All the sugar from the 3kg bag is put into smaller packets each weighing 150g.</p>  <p>How many smaller packets of sugar were made?</p> <p>Answer: _____</p>	<p><math>\frac{3000}{150} = 20</math></p> <p><b>20 smaller packets</b></p>	
14.	<p>Danny bought a cell-phone for \$1200.00 and sold it to make a profit of \$300.00. Express the profit as a <b>percentage</b> of the cost price.</p> <p>Answer: _____</p>	<p><math>\frac{300}{1200} \times \frac{100}{1}</math></p> <p>= <b>25%</b></p>	
15.	<p>Vendor A sells mangoes at 4 for \$5.00. Vendor B sells mangoes at 5 for \$6.00.</p> <p>Which vendor sells the mangoes at a <b>cheaper</b> price?</p> <p>Answer: _____</p>	<p>Vendor A = <math>\\$5 \div 4</math> = \$ 1.25</p> <p>Vendor B = <math>\\$6 \div 5</math> = \$ 1.20</p> <p><b>Vendor B sells at a cheaper price</b></p>	

16.	<p>Name of the solid shown below:</p> <div></div> <p>Answer:_____</p>	<b>Sphere</b>				
17.	<p>Write the phrase from the box to correctly complete the sentence below.</p> <table><tr><td>Larger Than</td><td>Smaller Than</td><td>The Same as</td></tr></table> <div></div> <p>The angle shown is_____ 90°</p>	Larger Than	Smaller Than	The Same as	<b>The Same As</b>	
Larger Than	Smaller Than	The Same as				
18.	<p>Gary is facing east. He made a quarter of a turn in an anticlockwise direction. What direction is he now facing?</p> <div></div> <p>Answer: _____</p>	<b>North</b>				

19.

The tally chart below shows the number of boys who own fishes in each class.

CLASS	NUMBER OF BOYS
Std. 1	
Std. 2	HHH HHH II
Std. 3	HHH

If there were 25 boys among the three classes, how many boys owned fishes in Standard One?

Answer: \_\_\_\_\_

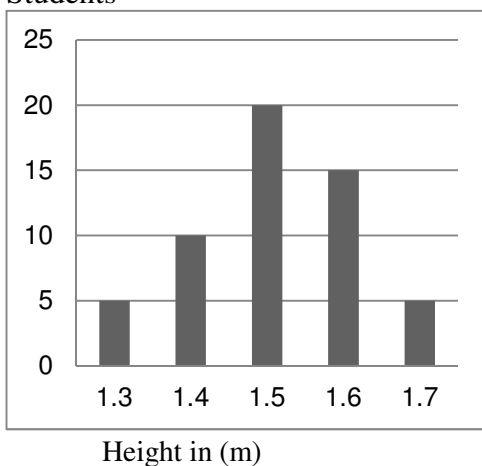
$$25 - 17 = 8$$

**8 boys owned fishes in Standard One**

20.

The bar chart below shows the heights of the students in Form Five in a secondary school.

Students



How many students are shorter than 1.5m?


Answer: \_\_\_\_\_

$$10 + 5 = 15$$


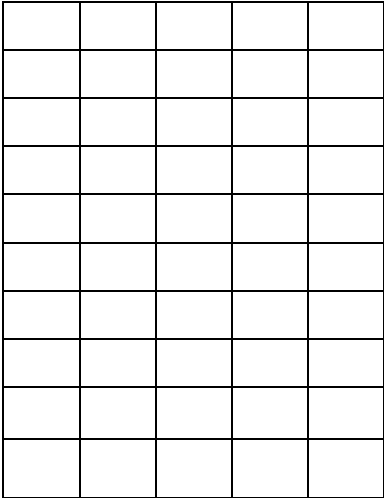
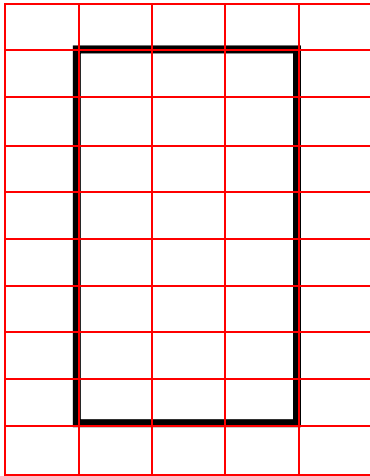
## SECTION 2


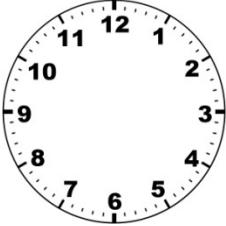

**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

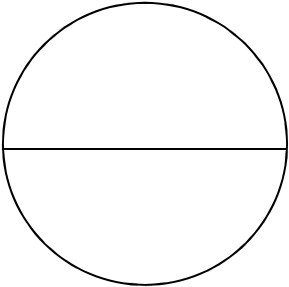
No.	Items	Working Column	Marks
21.	<p>Samantha spent <math>\frac{1}{4}</math> of her allowance on a snack and <math>\frac{3}{8}</math> on school stationery. She saves the remainder. What FRACTION of her money did she save?</p> <p>Answer: _____ (2)</p>	$\text{Spent} = \frac{1}{4} + \frac{3}{8}$ $= \frac{5}{8}$ $\therefore \text{Saved} = \frac{8}{8} - \frac{5}{8}$ $= \frac{3}{8}$	
22.	<p>Candice left home and cycled a distance of 2350m to Arima. She cycled a further 575m to her friend's house. What was the TOTAL distance in KILOMETRES Candice travelled?</p> <p>Answer: _____ (2)</p>	$2350 + 575 = 2925$ $\mathbf{2.925 \text{ km}}$	
23.	<p>A farmer planted coconut trees in a row. If the trees were planted 5 metres apart and the distance between the first and last tree is 45 metres, how many trees were planted?</p> <p>Answer: _____ (2)</p>	$\frac{45}{5} = 9$ $9 + 1 = 10$ <p><b>10 coconut trees were planted</b></p>	

24.	<p>A roll of string is cut into 25 pieces. Each piece is <math>\frac{3}{5}</math> m in length. What is the TOTAL length of string on the roll?</p> <p>Answer: _____ (2)</p>	$\frac{25}{1} \times \frac{3}{5}$ $= 15\text{m}$	
25.	<p>A tailor makes outfits (jerseys and shorts) for a football team.</p>  <p>He uses <math>\frac{4}{5}</math> m of cloth to make 1 jersey and 0.75m to make 1 pair of shorts.</p> <p>(a) How much material is needed to make an outfit?</p> <p>Answer: _____m (1)</p> <p>(b) How much material is needed to make 11 outfits for the football team?</p> <p>Answer: _____ m(2)</p>	<p>(a) Jersey = <math>\frac{4}{5} = 0.8\text{m}</math> Shorts = 0.75m</p> <p>Outfit = 0.8 + .75 = <b>1.55m</b></p> <p>(b) 11 Outfits = 1.55 x 11 = <b>17.05m</b></p>	!

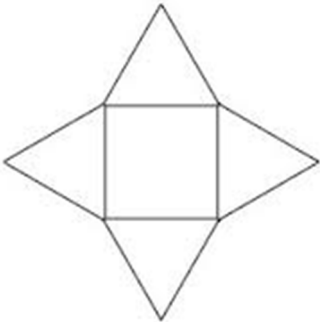
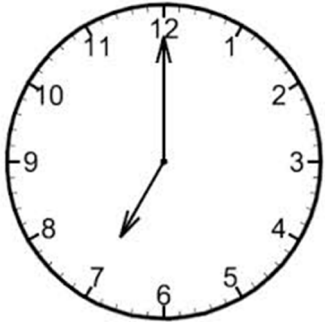
26.	<p>Seventy- five relatives attended a family reunion. There were tables that seat either 3 or 4 persons. If there were 12 tables that seat 4 persons, how many tables were available to seat 3 persons?</p> <p>Answer: _____ (3)</p>	$12 \times 4 = 48$ $\text{Family members} = 75$ $3 \text{ seaters} = 75 - 48$ $= 27 \div 3$ $= \mathbf{9 \text{ tables}}$	
27.	<p>Matthew works for \$160.00 a day. He spends <math>\frac{1}{8}</math> of this money on lunch.</p> <p>(a) How much does he spend on lunch per day?</p> <p>Answer :\$_____ (1)</p> <p>(b) Matthew works 5 days each week. How much of his salary is spent on lunch in 4 weeks?</p> <p>Answer: \$ _____ (2)</p>	<p>(a) <math>\text{Lunch} = \frac{1}{8} \times \frac{160}{1}</math></p> $= \mathbf{\$20}$ <p>(b) 1 day = 20  5 days = <math>20 \times 5</math>  1 week = \$100</p> $4 \text{ weeks} = \$100 \times 4$ $= \mathbf{\$ 400}$	
28.	<p><math>37\frac{1}{2}\%</math> of the marbles in a container is 252. What is the total number of marbles in the container?</p> <p>Answer: _____(3)</p>	$37\frac{1}{2}\% = \frac{75}{200}$ $= \frac{3}{8}$ $\frac{3}{8} = 252$ $1 = \frac{252}{1} \times \frac{8}{3}$ $= \mathbf{672}$	

29.	<p>The diagram below shows the cost of a watch. VAT is charged at 15%</p> <div style="display: flex; align-items: center; margin: 10px 0;"> <div style="margin-right: 10px;">\$300</div>  </div> <p>How much will a customer pay for the watch?</p> <p>Answer: _____(2)</p>	<p style="color: red;">Watch = 115% of \$300</p> $\frac{115}{100} \times \frac{300}{1}$ <p style="color: red;">= \$345</p>	
30.	<p>Draw a rectangle on the grid such that the area of the rectangle is 24 square units and the length is 8 units.</p> <div style="text-align: center; margin: 10px 0;">  </div> <p>Answer: _____(2)</p>	<div style="text-align: center; margin: 10px 0;">  </div>	

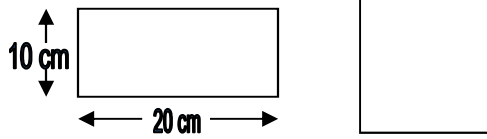
31.	 <p>Apples are sold as shown above. <b>(3 for \$10.00)</b></p> <p>(a) How much will Ruan pay for 9 apples?</p> <p>Answer: _____(1)</p> <p>(b) How many apples can Sally get for \$40.00?</p> <p>Answer: _____ (1)</p>	<p>(a) 3 apples = \$10</p> $1 \text{ apple} = \frac{10}{3}$ $9 \text{ apples} = \frac{10}{3} \times \frac{9}{1}$ $= \$30$ <p>(b) \$ 10 = 3 apples</p> $\$1 = \frac{3}{10}$ $\$40 = \frac{3}{10} \times \frac{40}{1}$ $= 12 \text{ apples}$	
32.	<p>A PTA meeting lasts for <math>2\frac{1}{4}</math> hours. It was scheduled to start at 5:30 p.m. The meeting began 10 minutes late because of late arrival of some members.</p> <p>(a) Calculate the conclusion time of the meeting.</p> <p>Answer: _____(2)</p> <p>(b)</p> 	<p>(a) 5 : 30 2 : 15      :10 <u>7 : 55 pm</u></p> 	

	On the clock above, show the time when the meeting ended. (1)		
33.	<p>The diameter of a circle is 14cm.</p>  <p>(a) What is the radius of the circle?</p> <p>Answer: _____cm.(1)</p> <p>(b) What distance will the circle cover if it makes two complete turns?</p> <p>Answer: _____cm. (2)</p>	<p>(a) Radius = <math>D \div 2</math>  <math>= 14 \div 2</math>  <math>= 7\text{cm}</math></p> <p>(b) Circumference = <math>D \times \pi</math>  <math>= 14 \times \frac{22}{7}</math>  <math>= 44\text{cm}</math>  2 times = <math>44 \times 2</math>  <math>= 88\text{cm}</math></p>	
34.	<p>The rates at a Hotel are shown below.</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p><b>Hotel Rates</b></p> <p><b>Adults: \$500 per day Mon. - Fri.</b></p> <p><b>Children: 10 and under \$250</b></p> </div> <p>A family of husband, wife and 2 children (ages 9 and 5 years), spent Wednesday to Friday at the Hotel.</p> <p>Calculate how much they paid for their stay at the Hotel.</p>	<p>Adults = <math>2 \times \\$500</math>  <math>= \\$1000/\text{day}</math></p> <p>3 days = <math>\\$1000 \times 3</math>  <math>= \\$3000</math></p> <p>Children = <math>2 \times \\$250</math>  <math>= \\$500/\text{day}</math></p> <p>3 days = <math>\\$500 \times 3</math>  <math>= \\$1500</math></p> <p>Total = <math>\\$3000 + \\$1500</math>  <math>= \\$4500</math></p>	

	Answer: _____(3)		
35.	<p>Larry borrows \$8000 for 3 years from a Bank. He pays 8% interest per year.</p> <p>(a) Calculate the interest.</p> <p>Answer: \$ _____(1)</p> <p>(b) Calculate the TOTAL amount he has to repay the bank.</p> <p>Answer: \$ _____(2)</p>	<p>(a) Simple Interest = <math>\frac{P \times R \times T}{100}</math>  <math>= \frac{\\$8000 \times 8 \times 3}{100}</math>  Simple Interest = <b>\$ 1920</b></p> <p>(b) Total Amount = \$ 8000 +  <u>\$ 1920</u>  <u>\$ 9920</u>    <b>Amount = \$ 9920</b></p>	
36.	<p>Draw the new position of the triangle after it is flipped about the mirror line.</p> <p>Answer: _____(2)</p>		

<p><b>37.</b></p>	<p>The diagram below shows the net of a solid.</p>  <p>(a) What is the name of the solid?</p> <p>Answer: _____(1)</p> <p>(b) How many lines of symmetry are there in the net?</p> <p>Answer: _____(1)</p>	<p><b>(a) Square based pyramid</b></p> <p><b>(b) 4</b></p>	
<p><b>38.</b></p>	<p>(a) What is the size of the smaller angle formed between the two hands on the face of the clock shown?</p>  <p>Answer: _____(1)</p> <p>(b) What number will the short hand point if it moved <math>90^\circ</math> in a clockwise direction?</p> <p>Answer_____ (2)</p>	<p><b>(a) 1 space = <math>30^\circ</math></b>  <b>5 spaces = <math>30^\circ \times 5</math></b>  <b>Smaller angle = <math>150^\circ</math></b></p> <p><b>(b) <math>90^\circ = 3</math> spaces</b>  <b>= 7 + 3</b>  <b>= 10</b></p>	

39.



The perimeter of the square is twice the perimeter of the rectangle.

- (a) Calculate the perimeter of the square.

Answer: \_\_\_\_\_(2)

- (b) What will be the length of ONE side of the square?

Answer: \_\_\_\_\_(1)

$$\begin{aligned} \text{(a) Perimeter of rect.} &= 2L + 2W \\ &= (2 \times 20) + (2 \times 10) \\ &= 40 + 20 \\ &= 60\text{cm} \end{aligned}$$

$$\begin{aligned} \therefore \text{Perimeter of square} &= 60 \times 2 \\ &= \mathbf{120\text{cm}} \end{aligned}$$

$$\begin{aligned} \text{(b) Perimeter of square} &= 120\text{cm} \\ \text{Side of square} &= 120 \div 4 \\ &= \mathbf{30\text{ cm}} \end{aligned}$$

40.

The table below shows the number of text messages Allan sends for a week.

Day of the Week	No. of Messages
Monday	30
Tuesday	23
Wednesday	28
Thursday	31
Friday	28

Calculate the average number of text messages he sends per day.

Answer: \_\_\_\_\_(2)

Average number of texts =  $\frac{\sum N[n]}{n}$

$$= \frac{30 + 23 + 28 + 31 + 28}{5}$$

$$= \frac{140}{5}$$

= 28 texts per day

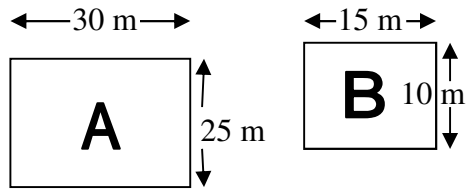
### SECTION 3

**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
41.	<p>Allan sold 20% of his stamps from his stamp collection. He gave his friend Harry <math>\frac{3}{4}</math> of the remainder. Allan remained with 80 stamps.</p> <p>(a) Calculate how many stamps Allan had at the beginning.</p> <p>Answer: _____(3)</p> <p>(b) How many stamps did Harry receive from Allan?</p> <p>Answer: _____(2)</p>	<p>(a) Remained with = 80</p> <p>Sold = 20 % or <math>\frac{1}{5}</math></p> <p>Remainder = <math>\frac{4}{5}</math></p> <p>Gave Harry = <math>\frac{3}{4} \times \frac{4}{5}</math></p> <p style="text-align: center;"><math>= \frac{3}{5}</math></p> <p>Sold + Harry = <math>\frac{1}{5} + \frac{3}{5}</math></p> <p style="text-align: center;"><math>= \frac{4}{5}</math></p> <p>Remained with = <math>\frac{5}{5} - \frac{4}{5}</math></p> <p style="text-align: center;"><math>= \frac{1}{5}</math></p> <p><math>\therefore \frac{1}{5} = 80</math></p> <p><math>1 = 80 \times 5</math></p> <p style="text-align: center;"><b>= 400 stamps</b></p> <p>(b) Harry = <math>\frac{3}{5} \times \frac{100}{1}</math></p> <p style="text-align: center;"><b>= 60 stamps</b></p>	

42.

A gardener owned two rectangular parcels of land as shown below.



(a) What is the area of parcel B?

Answer: \_\_\_\_\_(1)

(b) How many times is parcel A larger than parcel B?

Answer: \_\_\_\_\_(2)

(c) A plough owner was paid \$250.00 to prepare parcel B. How much will he charge to plough parcel A?

Answer: \_\_\_\_\_(2)

$$\begin{aligned} \text{(a) Area of Parcel B} &= L \times W \\ &= 15 \times 10 \\ &= \mathbf{250 \, m^2} \end{aligned}$$

$$\begin{aligned} \text{(b) Area of Parcel A} &= L \times W \\ &= 30 \times 25 \\ &= 750 \, m^2 \end{aligned}$$

$$\begin{aligned} \text{Parcel A} &= \frac{750}{250} \\ \text{Parcel B} &= 250 \end{aligned}$$

**= 3 times larger**

$$\begin{aligned} \text{(c) He will charge 3 times the amount that he charged for parcel B,} \\ \therefore \$250 \times 3 \\ = \mathbf{\$ 750} \end{aligned}$$

43.

The stove shown was bought by Janet.



**Original Price  
\$5000  
20% off**

(a) Calculate the discount given.

Answer: \_\_\_\_\_ (2)

(b) Calculate the price after the discount.

Answer: \_\_\_\_\_ (1)

(c) Janet was charged 15% VAT after the discount was given. Calculate the price paid for the stove.

Answer: \_\_\_\_\_ (2)

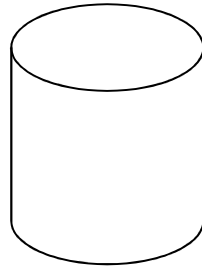
$$\begin{aligned} \text{(a) Discount} &= 20\% \times \$5000 \\ &= \frac{1}{5} \times \frac{5000}{1} \\ &= \$1000 \end{aligned}$$

$$\begin{aligned} \text{(b) After disc.} &= \$5000 - \$1000 \\ &= \$4000 \end{aligned}$$

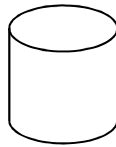
$$\begin{aligned} \text{(c) VAT} &= \frac{115}{100} \times \frac{5000}{1} \\ &= \$5750 \end{aligned}$$

44.

The two containers below show the capacity of water in each of them.



8.5 litres



850ml

- (a) How many small containers of water can be filled from the large container?

Answer: \_\_\_\_\_(2)

- (b) A student took  $1\frac{1}{2}$  mins to fill 1 small container of water from the large container. If he began an exercise at 9:15 a.m. to fill the number of small containers at what time did he complete the exercise?

Answer: \_\_\_\_\_(3)

$$\begin{aligned} \text{(a) } 8.5 \text{ L} &= 8500 \text{ ml} \\ &= \frac{8500}{850}^{10} \\ &= 10 \end{aligned}$$

**= 10 small containers  
can be filled from the big container**

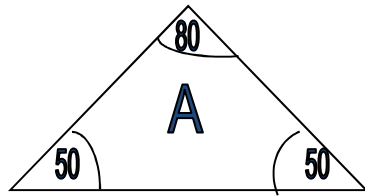
$$\begin{aligned} \text{(b) } 1 \text{ sm. container} &= 1.5 \text{ mins} \\ 10 \text{ sm. Containers} &= 1.5 \times 10 \\ &= 15 \text{ mins} \end{aligned}$$

**Started = 9 : 15**

**Took =  $\frac{15}{9}$  : 15  
9 : 30 am**

**Completed filling at 9:30 am**

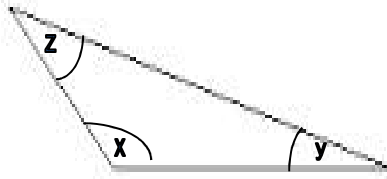
45.



(a) Write the name of the type of triangle labelled A.

Answer: \_\_\_\_\_ (1)

(b)

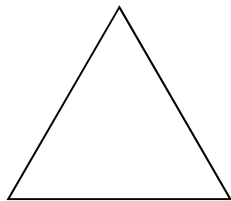


Angle x,y, and z are shown above on the triangle.

Arrange the angles in order of size starting from the SMALLEST.

Answer: \_\_\_\_\_ (2)

(a) The lengths of all sides of the triangle are equal.



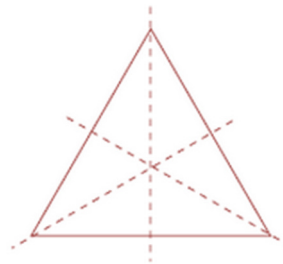
Draw ALL the lines of symmetry on the triangle.

Answer: \_\_\_\_\_ (2)

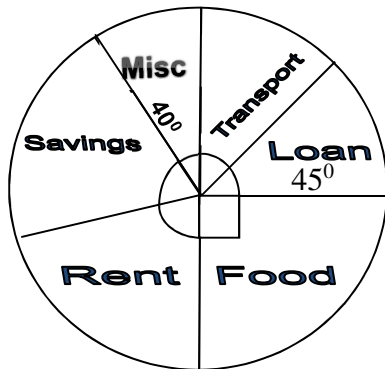
(a) **ISOCELES TRIANGLE**

(b) **y z x**

(c)



46.



This pie chart above shows the budget of Mr. Kapil's monthly salary of \$7200.00

- (a) What is the size of the angle that represents transport?

Answer: \_\_\_\_\_ (1)

- (b) Savings and Rent represent the same amount.

Calculate the size of angle of Mr. Kapil's savings for the month.

Answer: \_\_\_\_\_ (2)

- (c) Calculate the amount of money spent on rent for the month.

Answer: \_\_\_\_\_ (1)

- (d) Circle one of the following to show the angle representing rent.

45°, 70°, 90°, 40°

Answer: \_\_\_\_\_ (1)

$$\begin{aligned} \text{(a) Transport} &= 180^\circ - (90^\circ + 45^\circ) \\ &= 180^\circ - 135^\circ \\ &= 45^\circ \end{aligned}$$

$$\begin{aligned} \text{(b) Savings} &= \frac{360^\circ - (180^\circ + 40^\circ)}{2} \\ &= \frac{360^\circ - 220^\circ}{2} \\ &= \frac{140}{2} \\ &= 70^\circ \end{aligned}$$

$$\begin{aligned} \text{(c)} \quad \frac{70}{360} \times \frac{7200}{1} \\ = \$ 1400 \end{aligned}$$

**End of Test**



# TEST

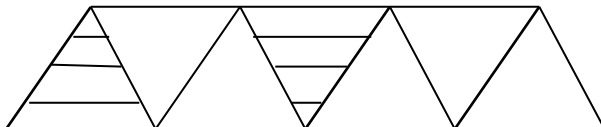
# 6

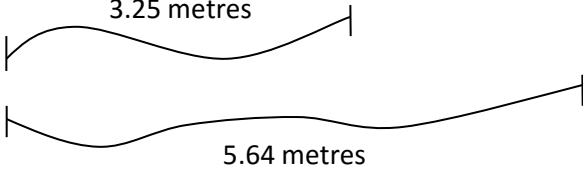
# MATHEMATICS TEST 6

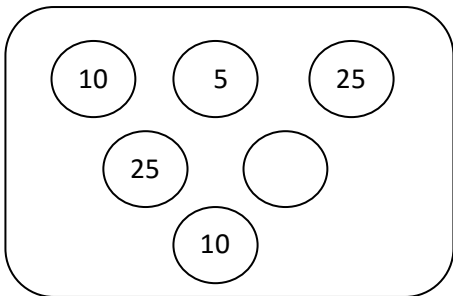
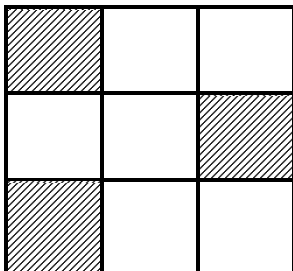
# TIME- 75 MINUTES

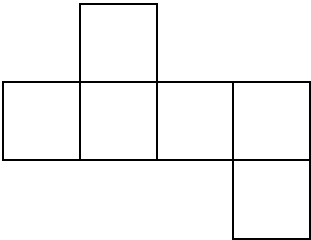
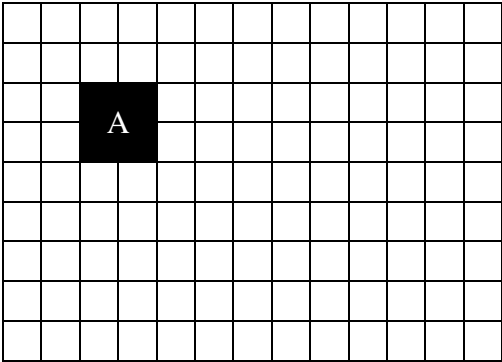
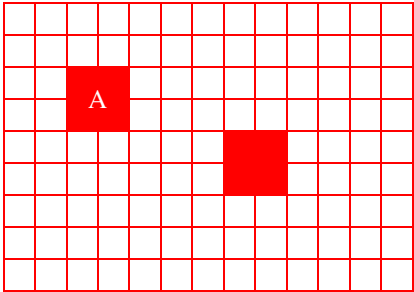
## SECTION 1

Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

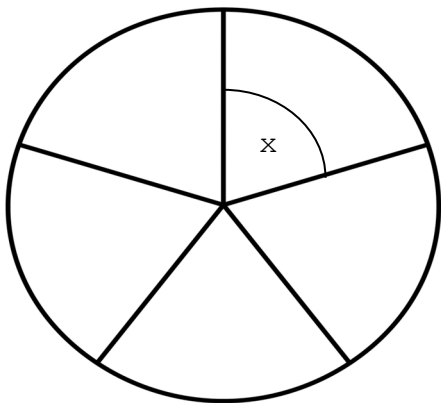
No.	Items	Working Column	Marks												
1.	<p><b>ADD:</b></p> <div><div>928</div><div>+ 401</div><div></div></div> <p>Answer: <div></div></p>	<div>928 + 401 = 1329</div>													
2.	<p>Write the numeral which represents</p> <p><math>(5 \times 10000) + (4 \times 100) + (3 \times 10) + (2 \times \frac{1}{10})</math></p> <p>Answer: <div></div></p>	<table><tr><td>TTH</td><td>TH</td><td>H</td><td>T</td><td>O</td><td><math>\frac{1}{10}</math></td></tr><tr><td>5</td><td>0</td><td>4</td><td>3</td><td>0</td><td>2</td></tr></table> <div>50430.2</div>	TTH	TH	H	T	O	$\frac{1}{10}$	5	0	4	3	0	2	
TTH	TH	H	T	O	$\frac{1}{10}$										
5	0	4	3	0	2										
3.	<p>What FRACTION of the whole shape is shaded?</p> <div></div> <p>Answer: <div></div></p>	<div><math>\frac{2}{7}</math></div>													
4.	<p><b>DIVIDE:</b></p> <div><div>6</div><div> </div><div>3612</div></div> <p>Answer: <div></div></p>	<div>602</div>													

5.	Express $\frac{23}{5}$ as a MIXED number.  Answer: _____	$4\frac{3}{5}$	
6.	James has 160 melons. He sells $\frac{3}{4}$ of them.  How many melons does James sell?  Answer: _____	$\text{Sold} = \frac{3}{4} \times \frac{160}{1}$ $= 120 \text{ melons}$	
7.	Michael was born in March 1998. He moved to Caroni in June 2012. How old was Michael when he moved to Caroni?  Answer: _____	$2012 - 1998$ $= 14 \text{ years old}$	
8.	 <p>Find the total length of the 2 pieces of string above.</p> <p>Answer: _____ m</p>	$3.25 + 5.64$ $= 8.89 \text{ m}$	
9.	Every seventh customer at SuperShow Cinema is given a free ticket to the movie. How many free tickets are given out if 65 customers go to the cinema?  Answer: _____ tickets	$65 \div 7 = 9 \text{ rem. } 2$ $9 \text{ free tickets}$	

10.	<p>Complete the table below.</p> <table><tr><td>Common Fraction</td><td>Decimal Fraction</td><td>Percentage</td></tr><tr><td><math>\frac{12}{25}</math></td><td></td><td>48%</td></tr></table>	Common Fraction	Decimal Fraction	Percentage	$\frac{12}{25}$		48%	$\frac{12}{25} = 12 \div 25$ $= 0.48$	
Common Fraction	Decimal Fraction	Percentage							
$\frac{12}{25}$		48%							
11.	<p>Convert 4.5 kilometres to metres.</p> <p>Answer: _____ m</p>	4500 m							
12.	<p>Andy has the coins shown in the diagram below.</p> <div></div> <p>The total value of all the coins is \$1.00 What is the value of the unmarked coin?</p> <p>Answer: _____</p>	25 c							
13.	<p>In the figure below EACH square represents 1cm<sup>2</sup>.</p> <div></div> <p>Figure 1</p> <p>The area of the shaded region is</p> <p>Answer: _____ cm<sup>2</sup></p>	3 cm <sup>2</sup>							

14.	<p>Raj left for school at 7:25a.m. He took 1 hour and 5 minutes to get to school. At what time did he arrive at school?</p> <p>Answer: _____</p>	$7:25 + 1:05 =$ $8:30 \text{ am}$	
15.	<p>The figure below shows the net of a solid.</p>  <p>What is the name of the solid?</p> <p>Answer: _____</p>	<p><b>Cube</b></p>	
16.	 <p>The object moves in a straight line 5 units to the right and two units down. Draw its image on the grid.</p>		

17. A circular piece of paper is cut into five EQUAL parts as shown in the diagram below. What is the size of angle  $x$ ?

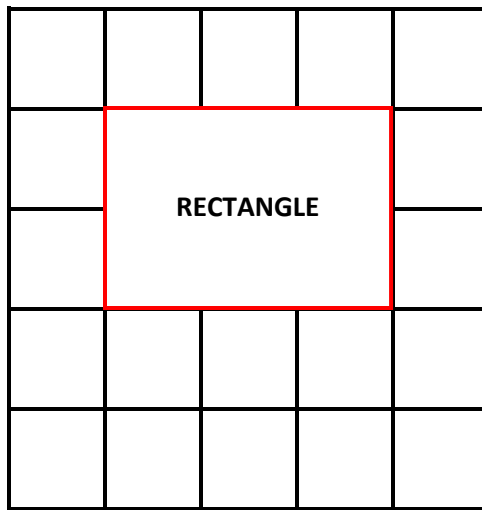
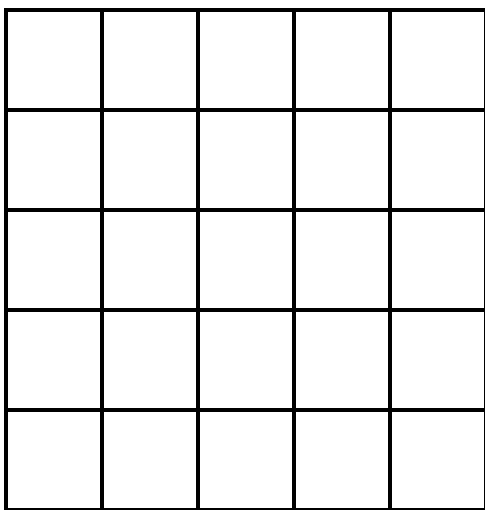


Answer: \_\_\_\_\_ degrees

$$360^\circ \div 5 = 72^\circ$$

$$x = 72^\circ$$

18. On the grid below, draw a four-sided figure with four right angles, TWO pairs of parallel lines and ONLY two lines of symmetry.



Answer: \_\_\_\_\_

19. Complete the table below.

FRUITS	TALLY	FREQUENCY
Mangoes		8
Plums		5
Oranges		4

Answer: \_\_\_\_\_

~~||||~~ 111

20. The mean of 14 and 16 is the same as the mean of 20 and .

What number does  represent?

Answer: \_\_\_\_\_

**Totals must be the same**

$$14 + 16 = 20 + \square$$

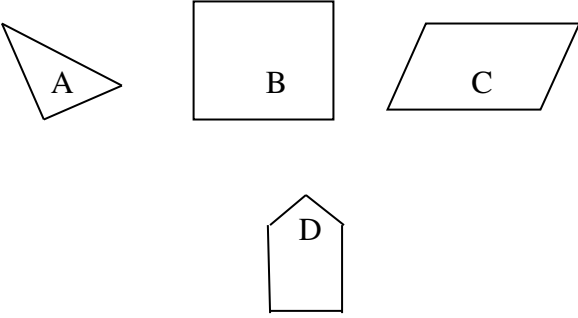
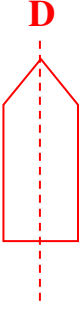
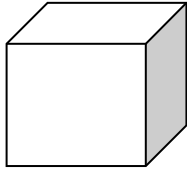
$$30 = 20 + 10$$

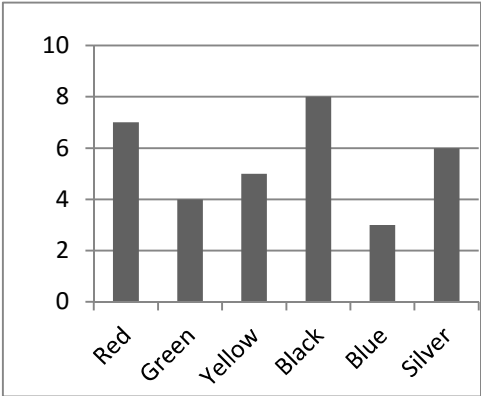
$$\therefore \square = 10$$

## SECTION 2

Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.

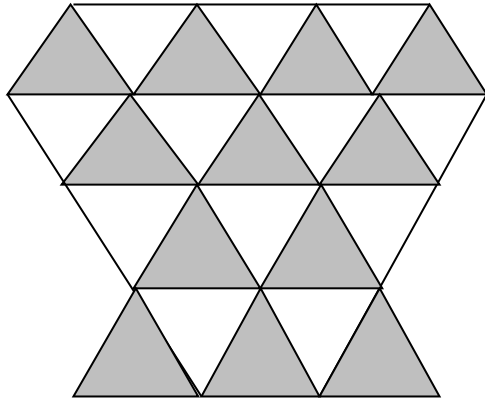
No.	Items	Working Column	Marks
21.	<p>Here are four number chits.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin: 2px;">5</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">4</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">7</div> <div style="border: 1px solid black; padding: 5px; margin: 2px;">3</div> </div> <p>(a) What is the SMALLEST number that can be made using these cards?</p> <p>Answer: _____ (1)</p> <p>(b) Arrange the above chits to show the largest number between 4000 and 5000 that is divisible by 5.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; width: 40px; height: 30px; margin: 2px;"></div> <div style="border: 1px solid black; width: 40px; height: 30px; margin: 2px;"></div> <div style="border: 1px solid black; width: 40px; height: 30px; margin: 2px;"></div> <div style="border: 1px solid black; width: 40px; height: 30px; margin: 2px;"></div> </div> <p>Answer: _____ (2)</p>	<p>(a) <b>3457</b></p> <p>(b) <b>4375</b></p>	
22.	<p>Find the product of <math>3\frac{3}{5}</math> and <math>2\frac{7}{9}</math>.</p> <p>Answer: _____ (2)</p>	$3\frac{3}{5} \times 2\frac{7}{9}$ $= \frac{18}{5} \times \frac{25}{9}$ $= \mathbf{10}$	
23.	<p>Which of the following fractions is the SMALLEST?</p> <p><math>\frac{7}{12}</math>, <math>\frac{5}{8}</math>, <math>\frac{2}{3}</math></p> <p>Answer: _____ (2)</p>	$\frac{7}{12} \quad \frac{5}{8} \quad \frac{2}{3}$ $\frac{14}{24} \quad \frac{15}{24} \quad \frac{16}{24}$ $= \frac{7}{12}$	

<p>24.</p>	<p>Write the next TWO numbers to complete the sequence below.</p> <p>1, 4, 9, 16, 25, _____, _____.</p> <p>Answer: _____ and _____(2)</p>	<p>Squared Numbers <math>6^2</math> <math>7^2</math></p> <p>= 36 49</p>	
<p>25.</p>	<div data-bbox="207 625 782 940">  </div> <p>Which of the plane shapes above has ONE line of symmetry.</p> <p>Answer: _____ (2)</p>	<div data-bbox="1101 697 1182 1003">  </div>	
<p>26.</p>	<div data-bbox="354 1354 539 1522">  </div> <p>(a) What is the length of one edge of the cube?</p> <p>Answer: _____cm (1)</p> <p>(b) What is the area of one face of the cube?</p> <p>Answer: _____cm<sup>2</sup> (2)</p>	<p>(a) Volume = <math>S \times S \times S</math></p> <p><math>S^3 = \sqrt[3]{125}</math></p> <p><b><math>S = 5\text{cm}</math></b></p> <p>(b) Area of square ( 1face) = <math>S \times S</math></p> <p><math>= 5 \times 5</math></p> <p><b><math>= 25\text{cm}^2</math></b></p>	

27.	<p>There are 35 students in a Std 5 class. On Monday, 80% of the students were present. How many students were ABSENT on Monday?</p> <p>Answer: _____ (2)</p>	<p>Present = 80%</p> <p>Absent = 20% x 35</p> $= \frac{1}{5} \times \frac{35}{1}$ <p>= 7 students were absent</p>	
28.	<p>1 ball and 2 tennis rackets cost \$250.00.</p> <p>If 1 ball and 4 tennis rackets cost \$460.00, what is the cost of ONE tennis racket?</p> <p>Answer: \$ _____ (3)</p>	<p>1 b + 4 T.R = \$ 460</p> <p>1 b + 2 T.R = \$ 250</p> <p>∴ 2 T.R = \$ 210 (460 – 250)</p> <p>1 T.R = \$ 210 ÷ 2</p> <p>1 T.R = \$ 105</p>	
29.	<p>The graph below shows the number of each colour of cars in the parking lot of Do Well Primary School.</p>  <p>How many cars are there in the car park?</p> <p>Answer: _____ (2)</p>	<p>Total no. of cars = 7 + 4 + 5 + 8 + 3 + 6</p> <p>= 33 cars</p>	
30.	<p>For every \$2.00 that Samantha saves, her brother John saves 1 dollar MORE. At the end of the week, Samantha saved \$10.00. How much money does John save in the same time?</p> <p>Answer: _____ (2)</p>	<p>Sam = \$2    John = \$ 3</p> <p>Sam = \$ 10</p> <p>John = (10 ÷ 2) x 3</p> <p>= \$15</p>	

<p><b>31.</b></p>	<p>Jade is asked to multiply 472 by 32. In error, she multiplies 472 by 22.</p> <p>(a) What answer would Jade get?</p> <p>Answer: _____ (1)</p> <p>(b) Complete the statement below.</p> <p>The difference between the correct answer and the Jade's answer will be equal to:</p> <p>472 × <input type="text"/> (1)</p> <p>(c) What is the CORRECT answer that was asked of Jade?</p> <p>Answer: _____ (1)</p>	<p>(a) <math display="block">\begin{array}{r} 472 \times \\ \underline{22} \\ 944 \\ \underline{9440} + \\ \hline 10384 \end{array}</math></p> <p>(b) <math>32 - 22 = 10</math></p> <p>(c) <math display="block">\begin{array}{r} 472 \times \\ \underline{32} \\ 944 \\ \underline{14160} \\ \hline 15104 \end{array}</math></p>	
<p><b>32.</b></p>	<p>Ajay was given a box containing 35 coloured pencils for his birthday. He lost 10 one day at school when the box fell down.</p> <p>What fraction of coloured pencils REMAINED?</p> <p>Answer: _____(2)</p>	<p><math>35 - 10 = 25</math></p> <p>Fraction Remained = <math>\frac{25}{35}</math></p> <p><math>= \frac{5}{7}</math></p>	
<p><b>33.</b></p>	<p>Justin goes to school 3.5km away from his home. He travels by car for part of the way and walks a further 200m to get there.</p> <p>What distance does Justin travel by car?</p> <p>Answer: _____ km (2)</p>	<p>Car = <math>3.5 \text{ km} - 0.2 \text{ km}</math> = <b>3.3 km</b></p>	

34.



(a) State as a decimal the portion of the diagram above that is shaded.

Answer: \_\_\_\_\_ (1)

(b) What percentage of the diagram is UNSHADED?

Answer: \_\_\_\_\_ (2)

$$\begin{aligned} \text{(a) Shaded} &= \frac{12}{24} \\ &= \mathbf{0.5} \end{aligned}$$

$$\begin{aligned} \text{(b) Unshaded} &= \frac{12}{24} \times 100 \\ &= \mathbf{50\%} \end{aligned}$$

35.



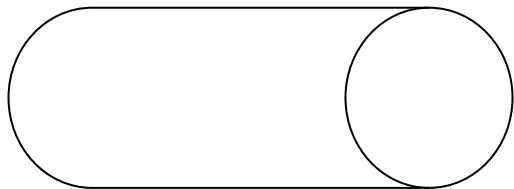
A can holds 1.8 litres of water. How many cups, each holding 150ml must be used to fill the large can?

Answer: \_\_\_\_\_ cups (2)

$$\begin{aligned} 1.8 \text{ L} &= 1800 \text{ ml} \\ &= 1800 \div 150 \\ &= \mathbf{12 \text{ cups}} \end{aligned}$$

<p><b>36.</b></p>	<p>The diameter of the circle in the diagram below is 12cm. What is the area of the square?</p> <div data-bbox="360 346 555 539" data-label="Image"> </div> <p>Answer: _____cm<sup>2</sup> (2)</p>	<p>Area of square = S x S  = 12 x 12  = <b>144 cm<sup>2</sup></b></p>	
<p><b>37.</b></p>	<p>Mr. Lee works for \$20.00 an hour. He works Monday to Friday from 7:00 a.m. to 4:00 p.m. On Saturday he works from 8:00a.m to 12:00 noon.</p> <p>What is Mr. Lee's salary for one week working from Monday to Saturday?</p> <p>Answer: _____ (3)</p>	<p>1 day = 9 hours  5 days = 9 x 5  = 45 hours  Saturday = 4 hours  = 49 hours</p> <p>Salary = 49 x \$20  = <b>\$ 980</b></p>	
<p><b>38.</b></p>	<p>A piece of ribbon was cut into equal lengths of 25 cm long.</p> <p>There were 20 pieces in total.</p> <p>What was the original length of the ribbon in metres?</p> <p>Answer: _____m (2)</p>	<p>20 x 25cm = 500cm</p> <p>500 cm ÷ 100  = <b>5m</b></p>	

39.



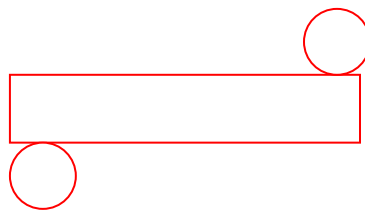
(a) Draw the net of the solid shown above in the space provided below.

Answer: \_\_\_\_\_ (2)

(b) What is the name given to this solid?

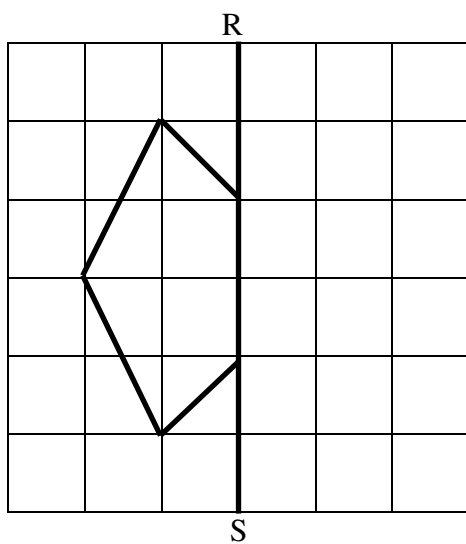
Answer \_\_\_\_\_(1)

(a)



(b) **CYLINDER**

40.



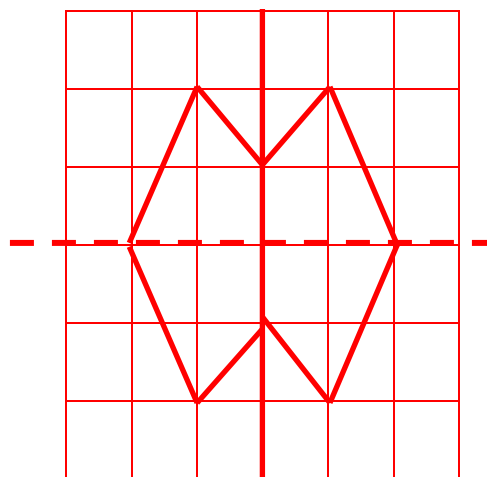
(a) RS is a mirror line. Draw the image of the shape given on the grid above

Answer \_\_\_\_\_ (1)

(b) Draw another line of symmetry on the new shape formed above.

Answer \_\_\_\_\_ (1)

(a)



### SECTION 3

**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
41.	<p>In Valley View Primary School there are 12 classes. Each class has 30 pupils.</p> <p>(a) How many students are there in the school?</p> <p>Answer: _____ (2)</p> <p>(b) If the size of EACH class is reduced to 20 students, how many MORE classrooms will be needed?</p> <p>Answer: _____ classrooms (3)</p>	<p>(a) Total Population = <math>12 \times 30</math> = <b>360 students</b></p> <p>(b) <math>360 \div 20 = 18</math> classrooms</p> <p><math>\therefore</math> <b>More classrooms = 6</b> (<math>18 - 12</math>)</p>	
42.	<p>Roger picked 500 oranges from his field. He sold 80% and gave <b><u>half of the remainder</u></b> to his brother.</p> <p>(a) How many oranges did Roger sell?</p> <p>Answer: _____ (2)</p> <p>(b) How many oranges did he give to his brother?</p> <p>Answer: _____ (1)</p> <p>(c) Roger sold the oranges at 10 for \$15.00. Calculate how much money he made from the oranges he sold.</p> <p>Answer: _____ (2)</p>	<p>(a) Sold = <math>80\% \times 500</math> = <b>400 oranges</b></p> <p>(b) Remainder = <math>500 - 400</math> = 100 oranges</p> <p>Gave Brother = <math>\frac{1}{2} \times 100</math> = <b>50 oranges</b></p> <p>(c) 10 oranges = \$ 15 400 oranges = <math>(400 \div 10) \times 15</math> = <math>40 \times 15</math> = <b>\$ 600</b></p>	

<p><b>43.</b></p>	<p>The cost price of a stereo is \$350.00 and the selling price is \$420.00.</p> <p>(a) What is the percentage profit?</p> <p>Answer: _____% (2)</p> <p>(b) The customer is given a 10% discount. What price would he pay for TWO stereos?</p> <p>Answer: \$ _____ (3)</p>	<p>(a) Profit = S.P - C.P          = \$ 420 - \$350          = \$ 70          Profit % = <math>\frac{\text{Profit}}{\text{C.P}} \times 100</math>          = <math>\frac{70}{350} \times \frac{100}{1}</math>          = <b>20 %</b></p> <p>(b) 2 stereos = 2 x 420          = \$840          Discount = 10 %          Paid = 90 % x 840          = <math>\frac{90}{100} \times \frac{840}{1}</math>          = <b>\$756.00</b></p>	
<p><b>44.</b></p>	<p>Cindy and her 9 friends visited an amusement park. They each had to pay \$12.00 to enter the park.</p> <p>(a) How much money do they spend for ALL of them to enter the park?</p> <p>Answer: \$ _____ (3)</p> <p>(b) If Cindy paid with \$200.00, how much change does she receive?</p> <p>Answer: \$ _____ (2)</p>	<p>(a) 1 person = \$ 12          10 persons = \$12 x 10          = <b>\$ 120</b></p> <p>(b) Change = \$ 200 - \$ 120          = <b>\$ 80</b></p>	

45. At a stationery store the prices of sharpeners, erasers and pens are as shown in the table below:

ITEM	COST
Sharpener	50 cents each
Eraser	2 for \$1.50
Pen	\$1.20 each

- (a) Ben purchased 2 sharpeners, 4 erasers and 5 pens.

How much did Ben pay for the items purchased?

Answer: \$\_\_\_\_\_ (3)

- (b) Ben had exactly \$5.00 remaining. What other set of items could Ben purchase to spend ALL his remaining money

\_\_\_\_\_ sharpeners

\_\_\_\_\_ erasers

\_\_\_\_\_ pens

Answer: \_\_\_\_\_(2)

$$\begin{aligned} \text{(a) } 2 \text{ sharpeners} &= 50\text{c} \times 2 \\ &= \$1.00 \\ 4 \text{ erasers} &= \$1.50 \times 2 \\ &= \$3.00 \\ 5 \text{ pens} &= \$1.20 \times 5 \\ &= \$6.00 \end{aligned}$$

$$\begin{aligned} \text{Ben Paid} &= \$1 + \$3 + \$6 \\ &= \$10 \end{aligned}$$

$$\text{(b) Remainder} = \$5.00$$

**4 sharpeners**  
**4 erasers**  
**0 pens**

<p><b>46.</b></p>	<p>Mrs. Bedoe borrowed \$1500.00 at 10% simple interest for 2 years from Easy Credit Union.</p> <p>(a) How much interest did she pay?</p> <p>Answer: \$_____ (2)</p> <p>(b) How much money did she repay ALTOGETHER?</p> <p>Answer: \$_____ (1)</p> <p>(c) Mrs. Bedoe repaid the TOTAL amount in EQUAL monthly payments.</p> <p>How much did she repay EACH month?</p> <p>Answer: \$_____ (2)</p>	<p>(a) Simple Interest = <math>\frac{P \times R \times T}{100}</math>  <math>= \frac{1500 \times 10 \times 2}{100}</math>  <math>= \\$300</math></p> <p>(b) Amount = P + S.I  <math>= \\$1500 + \\$300</math>  <math>= \\$1800</math></p> <p>(c) Installments = <math>1800 \div 24</math>  <math>= \\$75</math></p>	
	<p><b>END OF TEST 6</b></p>		

# TEST

# 7

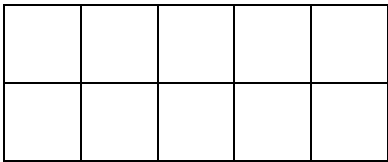

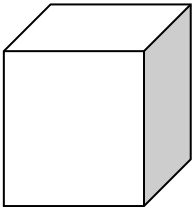
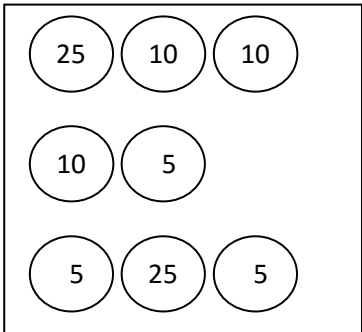
# MATHEMATICS TEST 7

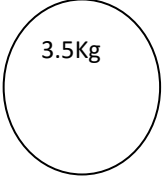
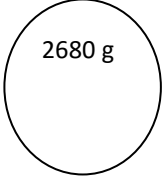
# TIME- 75 MINUTES

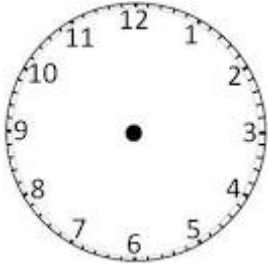
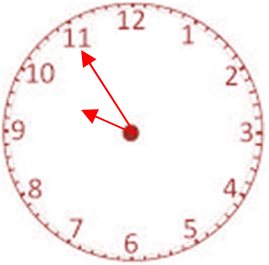
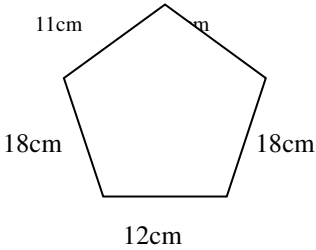
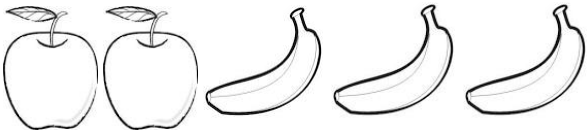
## SECTION 1

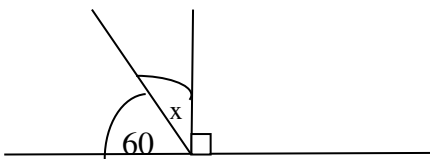
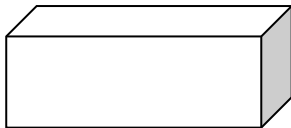
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Marks
1.	What is the place value of the digit 7 in the number 872 156?  Answer: _____	<b>TEN OF THOUSANDS</b> <b>TEN THOUSANDS</b>	
2.	Find the difference between 1354 and 869.  Answer: _____	<b>485</b>	
3.	Express 50% as a fraction in its LOWEST terms.  Answer: _____	$\frac{50}{100} = \frac{1}{2}$	
4.	Write the number 306 to the NEAREST hundred.  Answer: _____	<b>300</b>	
5.	MULTIPLY: 5.04 X 0.6  Answer: _____	<b>5.04 X 0.6</b> <b>= 504 X 6</b> <b>= 3024</b> <b>= 3.024</b>	









<p>6.</p>	<p>Shade <math>\frac{4}{5}</math> of the shape below.</p> 		
<p>7.</p>	<p>A football team played 12 games. The team lost 1 game, drew 2 and won the others. Write the number of games they WON as a decimal.</p> <p>Answer: _____</p>	<p>Total games played = 12          Won = 9 ( 12 – 3)          Fraction = <math>\frac{9}{12}</math>          Decimal = 0.75</p>	
<p>8.</p>	<p>How many vertices are there in the cube?</p>  <p>Answer: _____</p>	<p>8</p>	
<p>9.</p>	<p>Aaron has the coins shown in the box below.</p>  <p>How much money does he have in TOTAL?</p> <p>Answer: _____</p>	<p>Total = 25+10+10+10+5+5+25+5          = 95c or \$ 0.95</p>	


10.	<p>4.36 kilograms = _____ grams</p> <p>Answer: _____ grams</p>	<p><math>4.36 \times 1000</math></p> <p><math>= 4360 \text{ g}</math></p>	
11.	<p>Ria left home at 8:50 a.m and returns 11 hours later. At what time did Ria return home?</p> <p>Answer: _____</p>	<p><b>7 : 50 pm</b></p>	
12.	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Bowl A</p> </div> <div style="text-align: center;">  <p>Bowl B</p> </div> </div> <p>By how much is bowl A heavier than bowl B?</p> <p>Answer: _____ g</p>	<p><math>\text{Bowl A} - \text{Bowl B} = 3500 - 2680</math></p> <p><math>= 820 \text{ g heavier}</math></p>	
13.	<p>How many pieces of rope, each 30cm long can be cut from a piece of rope 3.6m long?</p> <p>Answer: _____ pieces</p>	<p><math>3.6 \text{ m} = 360 \text{ cm}</math></p> <p>Pieces that can be cut <math>= 360 \div 30</math></p> <p><math>= 12 \text{ pieces}</math></p>	

<p><b>14.</b></p>	<p>Jimmy runs <b>THREE</b> laps around the playground. He starts at 9:10am and takes 15 minutes to run each lap.</p> <p>Draw the time he finishes on the clock below:</p>  <p>Answer: _____</p>	<p>1 lap = 15 mins  3 laps = <math>15 \times 3</math>  = 45 mins</p> <p>Started = 9 : 10  3 laps = <u>  </u> : 45  <u>9 : 55</u> am</p> 	
<p><b>15.</b></p>	<p>Calculate the perimeter of the polygon.</p>  <p>Answer: _____</p>	<p>Perimeter of polygon =</p> <p><math>12 + 18 + 18 + 11 + 11</math></p> <p><b>= 70 cm</b></p>	
<p><b>16.</b></p>	 <p>Apples                      Bananas  2 for \$5.00                  3 for \$10.00</p> <p>Mummy buys 6 apples and 3 bananas. How much does she spend?</p> <p>Answer: _____</p>	<p>2 apples = \$5  1 apple = <math>\frac{5}{2}</math>  6 apples = <math>\frac{5}{2} \times 6</math>  = \$ 15</p> <p>3 bananas= \$10</p> <p>Total Spent = \$15 + \$10  = <b>\$25</b></p>	

17.	<p>What is the value of the <math>x</math>?</p>  <p>Answer: _____</p>	$x^0 = 180^0 - (60^0 + 90^0)$ $x^0 = 180^0 - 150^0$ $x^0 = 30^0$											
18.	 <p>This garden box is 12cm long and 5cm wide. If it contains 120cm<sup>3</sup> of soil, what is the depth of the soil in the box?</p> <p>Answer: _____cm</p>	<p>Height of box = <math>\frac{\text{Volume}}{L \times W}</math></p> $= \frac{120}{12 \times 5}$ $= \frac{120}{60}$ $= 2\text{cm}$											
19.	<p>The table below shows subjects studied by Standard five pupils.</p> <table border="1" data-bbox="222 1190 850 1379"><thead><tr><th>Subject studied</th><th>Number of pupils</th></tr></thead><tbody><tr><td>Mathematics</td><td>15</td></tr><tr><td>Grammar</td><td>18</td></tr><tr><td>Science</td><td>19</td></tr><tr><td>Social Studies</td><td>20</td></tr></tbody></table> <p>Calculate the mean.</p> <p>Answer _____pupils</p>	Subject studied	Number of pupils	Mathematics	15	Grammar	18	Science	19	Social Studies	20	<p>Mean = <math>\frac{\text{Sum}}{N(n)}</math></p> $= \frac{15 + 18 + 19 + 20}{4}$ $= \frac{72}{4}$ $= 18 \text{ pupils}$	
Subject studied	Number of pupils												
Mathematics	15												
Grammar	18												
Science	19												
Social Studies	20												

20. The table below shows the number of runs scored in 4 cricket matches.

Match	Runs scored
1	  
2	  
3	 
4	

 Represents 3 runs

The team scored a total of 36 runs. Complete the table to show the number of runs scored in match 4.

Answer: \_\_\_\_\_

$$36 \div 3 = 12 \quad \text{smiley face}$$

$$= 12 - 8$$

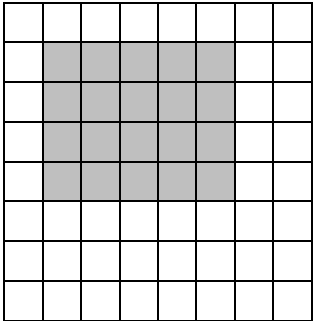
$$= 4$$



## SECTION 2

**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
21.	A bus travels 30 kilometres in 10 minutes. How far will the bus travel in 40 minutes?  Answer: _____ km (3)	$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$ $= 30 \div 10$ $= 3 \text{ km}$ $1 \text{ min} = 3 \text{ km}$ $40 \text{ mins} = 3 \times 40$ $= \mathbf{120 \text{ km}}$	
22.	A class comprising 30 students has 12 boys. What percentage of the class is girls?  Answer: _____ (2)	$\text{Girls} = 30 - 12$ $= 18$ $\text{Percentage} = \frac{18}{30} \times 100$ $= \mathbf{60\%}$	
23.	A jersey was priced at \$75.00 How much money do I save if I am given a 20% discount?  Answer: _____ (2)	$\text{Discount} = 20\% \times \$75$ $= \frac{20}{100} \times 75$ $= \mathbf{\$ 15}$	
24.	Three numbers when added gives a total of 965. If two of the numbers are 313 and 146, what is the third number?  Answer: _____ (2)	$965 = 313 + 146 + \square$ $965 = 459 + \square$ $965 - 459 = \square$ $\mathbf{506} = \square$	
25.	Jack had a piece of rope $5\frac{3}{5}$ m long. If he used $3\frac{1}{3}$ m of it, what length of the rope remains?  Answer: _____ m (2)	$5\frac{3}{5} - 3\frac{1}{3}$ $2\frac{9}{15} - 5\frac{5}{15}$ $= \mathbf{2\frac{4}{15}}$	

26.	<p>A school has 12 classes each containing 20 pupils. 4 pupils were absent in each class on Tuesday.</p> <p>Calculate the percentage of students PRESENT at school on Tuesday.</p> <p>Answer: _____ (3)</p>	<p>Total Population = <math>12 \times 20</math>  <math>= 240</math></p> <p>Present = <math>12 \times (20 - 4)</math>  <math>= 12 \times 16</math>  <math>= 192</math> present</p> <p>Percentage = <math>\frac{192}{240} \times \frac{100}{1}</math>  <math>= 80\%</math></p>	
27.	<p>Mummy poured water from 2 three-litre containers into glasses that could each hold 250ml of water. How many glasses of water will she fill?</p> <p>Answer: _____ (2)</p>	<p><math>1 - 2L = 2000\text{ml}</math>  <math>2 - 2L = 2000 \times 3</math>  <math>= 6000\text{ml}</math>  Glasses = <math>6000 \div 250</math>  <math>= 24</math> glasses</p>	
28.	<p>Find the product of 3 and 6.25.</p> <p>Answer: _____ (2)</p>	<p><math>3 \times 6.25</math>  <math>= 625 \times 3</math>  <math>= 1875</math>  <math>= 18.75</math></p>	
29.	<p>Calculate the area that is shaded below if each block represents 1 square centimeter.</p>  <p>Answer: _____ <math>\text{cm}^2</math> (2)</p>	<p>1 block = <math>1\text{cm}^2</math>  20 blocks = <math>1\text{cm}^2 \times 20</math>  <math>= 20\text{cm}^2</math></p>	

30.



(a) Write the time shown in digital notation.

Answer: \_\_\_\_\_ (1)

(b) Through how many degrees must the long hand move to point to the nine?

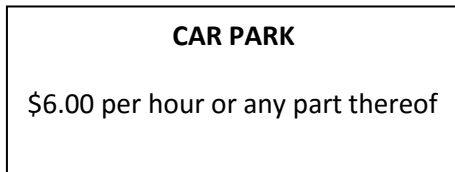
Answer: \_\_\_\_\_ degrees(2)

(a) **9 : 35**

(b) 1 space =  $30^0$

2 spaces =  $30^0 \times 2$   
=  **$60^0$**

31.

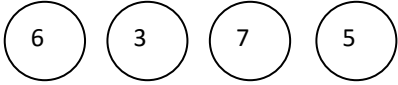


Mr. James parked his vehicle at 7:35am and returned at 1:15pm. How much did he have to pay?

Answer: \_\_\_\_\_ (3)

**7: 35 – 1:15 = 6 hours (Rounded)**

**Paid = 6 x \$6**  
**= \$ 36**

<p><b>32.</b></p>	<p>Four numerals are shown below.</p> <div style="text-align: center;">  </div> <p>Using each numeral only ONCE, write the</p> <p>(a) smallest four-digit odd number</p> <p>Answer: _____ (1)</p> <p>(b) largest four digit number</p> <p>Answer _____ (1)</p>	<p>(a) Smallest odd 4 digit number = <b>3567</b></p> <p>(b) Largest 4 digit number = <b>7653</b></p>	
<p><b>33.</b></p>	<p>Mary bought 4 dozens pens at \$4.00 each. She sold them for \$5.00 each.</p> <p>(a) How much profit did Mary make?</p> <p>Answer: _____ (2)</p> <p>(b) What was her profit percent?</p> <p>Answer: _____ (1)</p>	<p>(a) Profit = S.P – C.P = \$ 5 - \$ 4 = \$1 Number of pens bought = 4 x 12 = 48 Profit = 48 x \$1 = <b>\$48</b></p> <p>(b) Cost Price = 48 x \$4 = \$ 192 Profit Percent = <math>\frac{48}{192} \times \frac{100}{1}</math>  = <b>25%</b></p>	
<p><b>34.</b></p>	<p>Mrs. Singh borrows \$10 000.00 from the bank at a rate of 6% over 3 years. Calculate the amount she will have to repay after the three years have passed.</p> <p>Answer: _____ (3)</p>	<p><math>S.I = \frac{P \times R \times T}{100}</math> = <math>\frac{10000 \times 6 \times 3}{100}</math>  = \$1800  Amount = \$10 000 + \$1 800 = <b>\$11 800</b></p>	

**35.** (a) Complete the table below.

Shape	Edges	Vertices	Faces
Cuboid		8	6

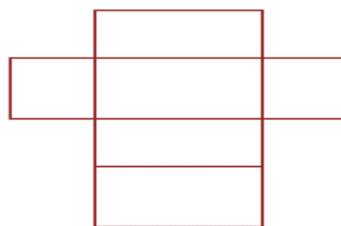
Answer: \_\_\_\_\_ (1)

(b) Draw a net of a cuboid in the space provided below.

Answer: \_\_\_\_\_ (2)

Shape	Edges	Vertices	Faces
Cuboid	<b>12</b>	8	6

(b)



**36.** Tim works an eight hour day and earns \$15 per hour.

(a) If he works for 6 days, how much money does he earn?

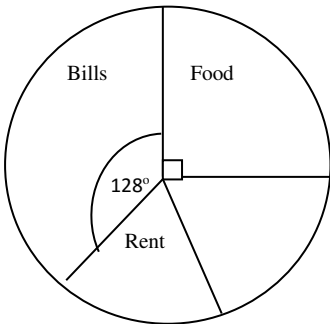
Answer: \$\_\_\_\_\_ (1)

(b) When Tim works on Sundays, he is paid per hour at 1 ½ times the week's day rate. How much does Tim earn on a Sunday?

Answer: \_\_\_\_\_ (2)

(a) 1 hour = \$15  
 1 day (8 hours) = \$15 x 8  
                   = \$ 120  
 6 days = \$120 x 6  
           = **\$720**

(b) Sundays = \$15 x 1.5  
               1 hour = \$ 22.50  
               8 hours = \$22.50 x 8  
                       = **\$ 180**

37.	<p>Which of the following is the best bargain?</p> <table><tr><td>3kg Rice For \$13.50</td><td>4kg Rice For \$8.00</td><td>5kg Rice For \$9.00</td></tr></table> <p>A                      B                      C</p> <p>Answer: _____ (3)</p>	3kg Rice For \$13.50	4kg Rice For \$8.00	5kg Rice For \$9.00	$\begin{aligned} 3 \text{ kg} &= \$13.50 \\ 1 \text{ kg} &= \frac{\$13.50}{3} \\ &= \$4.50 \\ \\ 4 \text{ kg} &= \$8 \\ 1 \text{ kg} &= \frac{\$8}{4} \\ &= \$2 \\ \\ 5 \text{ kg} &= \$9 \\ 1 \text{ kg} &= \frac{\$9}{5} \\ &= \$1.80 \\ \therefore \text{C is the best bargain} \end{aligned}$	
3kg Rice For \$13.50	4kg Rice For \$8.00	5kg Rice For \$9.00				
38.	<p>A table and four chairs together cost \$440. The cost of each chair is \$60. Calculate the cost of the table.</p> <p>Answer: \$ _____ (2)</p>	$\begin{aligned} 4 \text{ chairs} &= 4 \times \$60 \\ &= \$240 \\ \therefore \text{Table costs} &= \$440 - \$240 \\ &= \$200 \end{aligned}$				
39.	<p>The pie chart below shows how a budget of \$640 was spent in a household.</p> <div></div> <p>How much money was spent on food?</p> <p>Answer: _____ (2)</p>	$\begin{aligned} \text{Food} &= \frac{1}{4} \times \frac{640}{1} \\ &= \$160 \end{aligned}$				

40.	<p>Three bags of flour weighed the following: 2kg 340g; 1kg 260g; 4kg 700g.</p> <p>Calculate the total mass of the three bags.</p> <p>Answer: _____ (2)</p>	<p>Total Mass =</p> $  \begin{array}{r}  2\text{kg } 340\text{g} \\  1\text{kg } 260\text{g} \\  \underline{4\text{kg } 700\text{g} +} \\  7\text{kg } 1300\text{g} \\  + 1\text{kg } - 1000\text{g} \\  \hline  8\text{kg } 300\text{g}  \end{array}  $ <p>8kg 300g or 8.3kg</p>	
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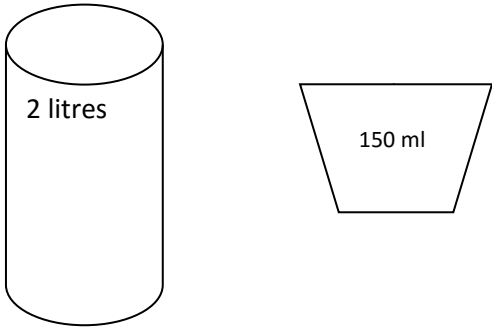
### SECTION 3

**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

41.	<p>Mr. Bean bought a box of 250 apples. 50% were ripe, 20% were green and the remainder had to be disposed.</p> <p>(a) How many apples were ripe?</p> <p>Answer: _____ (1)</p> <p>(b) How many apples had to be disposed?</p> <p>Answer: _____ (2)</p> <p>(c) Mr. Bean paid \$50 for the box of apples. How much money did he lose?</p> <p>Answer: _____ (2)</p>	<p>(a) Ripe = <math>50\% \times 250</math> = <b>125 apples</b></p> <p>(b) Disposed = <math>30\% (100\% - 70\%)</math> = <math>\frac{3}{10} \times \frac{250}{1}</math> = <b>75 apples</b></p> <p>(c) 250 apples = \$ 50 1 apple = <math>\\$50 \div 250</math> = \$ 0.20</p> <p>Disposed = 75 apples Loss = <math>75 \times \\$0.20</math> = <b>\$ 15</b></p>	
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42.	<p>The price list at the cafeteria at Movie City is shown below.</p> <p><b>Price List</b></p> <table><tr><td>Popcorn</td><td>\$7.25</td></tr><tr><td>Soft Drink</td><td>\$5.00</td></tr><tr><td>Candy</td><td>\$3.50</td></tr></table> <p>Sandy bought 2 popcorns, a soft drink and a candy. Steve bought 3 popcorns, 2 softdrinks and 2 candies.</p> <p>(a) What is the total amount spent by Sandy and Steve?</p> <p>Answer: _____ (2)</p> <p>(b) How much more than Sandy did Steve spend?</p> <p>Answer: _____ (2)</p> <p>(c) How many soft drinks can be bought with the difference in the amount spent by Sandy and Steve?</p> <p>Answer: _____ (1)</p>	Popcorn	\$7.25	Soft Drink	\$5.00	Candy	\$3.50	<p>(a) 2 popcorns = \$7.25 x 2 = \$ 14.50 1 soft drink = \$5.00 1 candy = \$3.50 Total = \$ 23.00</p> <p>3 popcorns= \$ 21.75 (\$7.25 x3) 2 soft drinks =\$10.00 (\$5 x 2) 2 candies = \$ 7.00 (\$3.50 x 2) = <u>\$38.75</u> Total spent = \$23.00 + \$38.75 = <b>\$ 61.75</b></p> <p>(b) Difference = \$38.75 - \$23.00 = <b>\$ 15.75</b></p> <p>(c) Soft drinks = \$15.75 ÷ \$5.00 = <b>3 soft drinks</b></p>
Popcorn	\$7.25							
Soft Drink	\$5.00							
Candy	\$3.50							
43.	<p>Ms. Sookoo has 120 crayons. If 20% of them are red, 3/10 are blue, and the rest are purple, calculate</p> <p>(a) the number of red crayons</p> <p>Answer: _____ (2)</p> <p>(b) the percentage of blue crayons.</p> <p>Answer: _____ (1)</p> <p>(c) the fraction of crayons that are purple</p> <p>Answer: _____ (2)</p>	<p>(a) Red = 20% x 120 = <b>24 red crayons</b></p> <p>(b) Percentage blue = <math>\frac{3}{10} \times \frac{100}{1}</math> = <b>30%</b></p> <p>(c) Purple = 100% - (20% + 30%) = 50% = <math>\frac{1}{2}</math></p>						

44.	<p>Students of the Standard One department are going on a field trip. 115 boys and 110 girls are going.</p> <p>(a) If one teacher must accompany every 15 students, how many teachers must go on the field trip?</p> <p>Answer: _____ teachers (2)</p> <p>(b) Buses are hired to transport everyone. If each bus holds 23 persons, how many buses will be needed?</p> <p>Answer: _____ (3)</p>	<p>(a) Total no. of pupils = <math>115 + 110</math> = 215 pupils</p> <p>No. of teachers = <math>215 \div 15</math> = <math>14 + 1</math> = <b>15 teachers</b></p> <p>(b) <math>215 + 15 = 230</math> persons No. of buses = <math>230 \div 23</math> = <b>10 buses</b></p>													
45.	<p>The weight of a group of athletes is shown in the table below:</p> <table><tr><td><b>Name:</b></td><td><b>Ann</b></td><td><b>Paul</b></td><td><b>Eli</b></td><td><b>Seeta</b></td><td><b>Sean</b></td></tr><tr><td><b>Weight: (kg)</b></td><td>74</td><td>64</td><td>83</td><td>83</td><td>86</td></tr></table> <p>(a) What is the modal weight?</p> <p>Answer _____ kg (1)</p> <p>(b) Calculate the average weight of the group.</p> <p>Answer _____ kg (2)</p> <p>(c) If Paul leaves the group, what is the new mean weight of the new group?</p> <p>Answer _____ kg (2)</p>	<b>Name:</b>	<b>Ann</b>	<b>Paul</b>	<b>Eli</b>	<b>Seeta</b>	<b>Sean</b>	<b>Weight: (kg)</b>	74	64	83	83	86	<p>(a) Modal Weight = <b>83kg</b></p> <p>(b) Average Weight = <math>74 + 64 + 83 + 83 + 86</math> = <math>\frac{390}{5}</math> = <b>78 kg</b></p> <p>(c) If Paul leaves = <math>390 - 64</math> Total = <math>\frac{326}{4}</math> = <b>81.5 kg</b></p>	
<b>Name:</b>	<b>Ann</b>	<b>Paul</b>	<b>Eli</b>	<b>Seeta</b>	<b>Sean</b>										
<b>Weight: (kg)</b>	74	64	83	83	86										

46.	<p>The container in the diagram holds 2 litres of juice when filled.</p> <div data-bbox="298 300 786 625">  <p>The diagram consists of two shapes. On the left is a cylinder with the text '2 litres' inside it. On the right is a trapezoid with the text '150 ml' inside it.</p> </div> <p>Ronald fills 5 glasses with 150ml juice.</p> <p>(a) How many milli-litres of juice is left in the bottle?</p> <p>Answer: _____ ml (3)</p> <p>(b) How many more FULL glasses can he pour from the remaining juice?</p> <p>Answer: _____ (2)</p>	<p>(a) 5 glasses = <math>150 \times 5</math> = 750ml</p> <p>Juice left = <math>2000 - 750</math> = <b>1250 ml</b></p> <p>(b) Full glasses = <math>1250 \div 150</math> = <b>8 full glasses</b></p>	
	<b>END OF TEST 7</b>		

# TEST

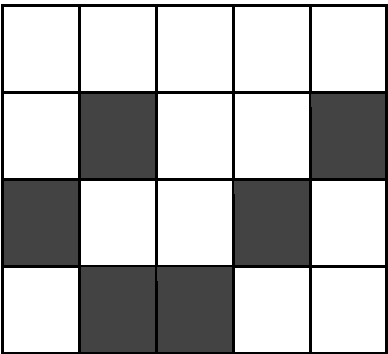
# 8

# MATHEMATICS TEST 8


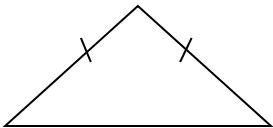
# TIME- 75 MINUTES

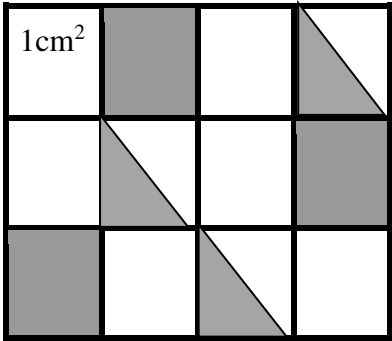


## SECTION 1

Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Marks
1.	<p>Write in figures: four hundred and seventy six thousand and twenty nine.</p> <p>Answer: _____</p>	<p><b>476 029</b></p>	
2.	<p>What fraction of the figure is shaded?</p>  <p>Answer: _____</p>	<p><b><math>\frac{6}{20} = \frac{3}{10}</math></b></p>	
3.	<p>Calculate the value of x in the fraction below.</p> $\frac{16}{x} = \frac{4}{5}$ <p>Answer: _____</p>	<p><b>x = 20</b></p>	

4.	<p>Order the following fractions from smallest to largest.</p> <p><math>\frac{3}{16}</math> , <math>\frac{1}{4}</math> , <math>\frac{3}{8}</math></p> <p>Answer:_____</p>	<p><math>\frac{3}{16}</math> , <math>\frac{1}{4}</math> , <math>\frac{3}{8}</math></p>							
5.	<p>State the PLACE VALUE of the underlined digit in the number 86. 7<u>9</u></p> <p>Answer:_____</p>	<p><b>Hundredths</b></p>							
6.	<p>Complete the table below.</p> <table><tr><td>Common Fraction</td><td>Decimal</td><td>%</td></tr><tr><td></td><td>.65</td><td>65%</td></tr></table> <p>Answer: _____</p>	Common Fraction	Decimal	%		.65	65%	<p><math>\frac{65}{100} = \frac{13}{20}</math></p>	
Common Fraction	Decimal	%							
	.65	65%							
7.	<p>Approimate 6 854 190 to the nearest thousand.</p> <p>Answer: _____</p>	<p>6 854 000</p>							
8.	<p>Express <math>37\frac{1}{2}\%</math> as a common fraction.</p> <p>Answer: _____</p>	<p><math>37\frac{1}{2}\% = \frac{75}{200}</math></p> <p><math>= \frac{3}{8}</math></p>							
9.	<p><math>10^2 - 6^2 =</math></p> <p>Answer:_____</p>	<p><math>10^2 - 6^2 = 100 - 36</math></p> <p><math>= 64</math></p>							

10.	<p>What is the value of 4 twenty five cent coins, 3 ten cent coins, and 1 five cent coin?</p> <p>Answer: _____</p>	$  \begin{array}{r}  4 \times 25c = \$1.00 \\  3 \times 10c = \$0.30 \\  1 \times 5c = +\$0.05 \\  \hline  \mathbf{\$1.35}  \end{array}  $	
11.	<p>Calculate the perimeter of the square shown in the diagram below:</p> <div style="text-align: center;"> <p>11cm</p>  </div> <p>Answer: _____cm</p>	$  \begin{array}{r}  \text{Perimeter} = S \times 4 \\  = 11 \times 4 \\  = \mathbf{44cm}  \end{array}  $	
12.	<p>What is the most suitable unit you can use to measure the length of your classroom?</p> <p>Answer: _____</p>	<b>Metres</b>	
13.	<p>Calculate:</p> $27 - 5\frac{3}{5}$ <p>Answer: _____</p>	$  \begin{array}{r}  27 - 5\frac{3}{5} \\  = \mathbf{21\frac{2}{5}}  \end{array}  $	
14.	<p>Give the name of the triangle shown below:</p> <div style="text-align: center;">  </div> <p>Answer: _____</p>	<b>Isosceles</b>	

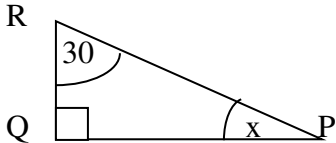
15.	<p>Calculate the area of the SHADED portion of the diagram below.</p>  <p>Answer: _____ cm<sup>2</sup></p>	<p><b>4.5 cm<sup>2</sup></b></p>	
16.	<p>Calculate the area of the rectangle below.</p>  <p>Answer: _____ m<sup>2</sup></p>	<p>Area of rect. = L x W  = 8 x 5  = <b>40m<sup>2</sup></b></p>	
17.	<p>Write the time shown on the clock below in digital notation?</p>  <p>Answer: _____</p>	<p><b>11:55</b></p>	

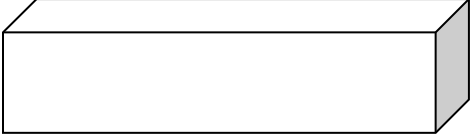

<p>18.</p>	<p>Draw the lines of symmetry in the pentagon below</p> <div data-bbox="418 258 675 499" data-label="Image"> </div> <p>Answer: _____</p>	<div data-bbox="993 212 1279 537" data-label="Image"> </div>													
<p>19.</p>	<p>What solid can be formed from the net shown below?</p> <div data-bbox="256 758 753 993" data-label="Image"> </div> <p>Answer: _____</p>	<p><b>Triangular prism</b></p>													
<p>20.</p>	<p>Complete the table below.</p> <table border="1" data-bbox="222 1295 875 1745"> <thead> <tr> <th>Colour</th> <th>Tally</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>Yellow</td> <td>   </td> <td>3</td> </tr> <tr> <td>Orange</td> <td> </td> <td>1</td> </tr> <tr> <td>Pink</td> <td></td> <td>9</td> </tr> </tbody> </table> <p>Answer: _____</p>	Colour	Tally	Frequency	Yellow		3	Orange		1	Pink		9	<div data-bbox="881 1430 1065 1463" data-label="Text"> <p><del>    </del> 1111</p> </div>	
Colour	Tally	Frequency													
Yellow		3													
Orange		1													
Pink		9													

## SECTION 2

**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

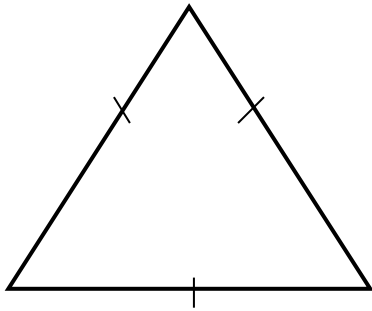
No.	Items	Working Column	Marks																								
21.	<p>There are 12 cupcakes in a box.If each person gets 1 cupcake, how many boxes of cupcakes will be needed for a school of 412 students and 20 teachers.</p> <p>Answer: _____ (2)</p>	<p>Total no. of persons = 412 + 20 432</p> <p>No. of boxes needed = 432 ÷ 12 = 36 boxes</p>																									
22.	<p>Calculate:</p> <table><tr><td></td><td>kg</td><td>g</td></tr><tr><td></td><td>8</td><td>240</td></tr><tr><td>-</td><td>5</td><td>320</td></tr></table> <p>Answer: _____(2)</p>		kg	g		8	240	-	5	320	<table><tr><td></td><td>kg</td><td>g</td></tr><tr><td></td><td>7</td><td>1240</td></tr><tr><td></td><td>8</td><td>240</td></tr><tr><td>-</td><td>5</td><td>320</td></tr><tr><td></td><td>2</td><td>920</td></tr></table> <p>2kg 920g</p>		kg	g		7	1240		8	240	-	5	320		2	920	
	kg	g																									
	8	240																									
-	5	320																									
	kg	g																									
	7	1240																									
	8	240																									
-	5	320																									
	2	920																									
23.	<p>Sanjay picked 480 mangoes. He sold <math>\frac{1}{2}</math> of his mangoes, gave his friend Aidan, <math>\frac{2}{3}</math> of the remainder and he kept the balance. How many mangoes was Sanjay left with?</p> <p>Answer: _____ (3)</p>	<p>Total = 480 mangoes Sold= 480 ÷ 2 = 240 Aidan = <math>\frac{2}{3}</math> x <math>\frac{240}{1}</math> = 120 mangoes Left with = <math>\frac{1}{3}</math> x <math>\frac{240}{1}</math> = 80 mangoes</p>																									
24.	<p>Rik left school at 3:15 p.m. and arrived home at 3:55 p.m. How many minutes did it take Rik to reach home from school?</p> <p>Answer: _____ (2)</p>	<p>3 : 55 – 3 : 15 0 : 40</p> <p>40 minutes</p>																									

25.	<p>Tom gets a discount of 15% off a book.</p> <p>What is the cost price of the book if the discount is \$24.00 ?</p> <p>Answer: _____</p> <p>(2)</p>	$15\% = \$ 24$ $\frac{3}{20} = \$24$ $1 = \frac{24}{1} \times \frac{20}{3}$ $= \$ 160$	
26.	<p>What is the sum of 4.9 , 12 and 0.75?</p> <p>Answer: _____ (2)</p>	$\begin{array}{r} 4.9 \\ 12.0 \\ + 0.75 \\ \hline 17.65 \end{array}$	
27.	<p>Calculate:</p> $8\frac{3}{4} \div 2\frac{5}{8} =$ <p>Answer: _____ (2)</p>	$8\frac{3}{4} \div 2\frac{5}{8}$ $\frac{35}{4} \times \frac{8}{21}$ $= 3\frac{1}{3}$	
28.	<p>The top of a rectangular counter measures 2.5 metres wide and 8.35 metres in length. What is the area of the counter?</p> <p>Answer: _____ m<sup>2</sup> (2)</p>	$\begin{aligned} \text{Area of rect.} &= L \times W \\ &= 8.35 \times 2.5 \\ &= 20.875 \text{ m}^2 \end{aligned}$	
29.	<p>Calculate the size of angle RPQ in degrees.</p>  <p>Answer: _____ degrees (2)</p>	$\begin{aligned} x &= 180^0 - (30^0 + 90^0) \\ x &= 180^0 - 120^0 \\ x &= 60^0 \end{aligned}$	

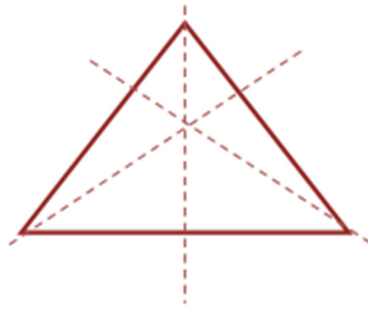
30.	<p>What is the volume of a cuboid that is 20 cm high, 8 cm wide and 24 cm long?</p>  <p>Answer: _____ cm<sup>3</sup>(2)</p>	<p>Volume of cuboid = L x W x H  = 24 x 20 x 8  = <b>3840cm<sup>3</sup></b></p>	
31.	<p>The marked price of a television is \$1200. 00</p>  <p>A discount of 20% was given during a sale. How much will a person now pay for the same television?</p> <p>Answer: _____ (3)</p>	<p>Discount = 20%  Customer pays = 80%</p> $\frac{80}{100} \times \frac{1200}{1}$ <p>= <b>\$960</b></p>	
32.	<p>James spent <math>\frac{1}{3}</math> of his allowance to buy a game. He later spent \$20.00 for a new book. He now has <math>\frac{1}{3}</math> of his money remaining. What was James' allowance?</p> <p>Answer _____ (3)</p>		

33.	<p>Mr. Chin bought 5 fans at \$250.00 each. VAT of 15% is charged. What is the total cost of the 5 fans?</p> <p>Answer: _____ (3)</p>	$  \begin{aligned}  5 \text{ fans} &= \$250 \times 5 \\  &= \$1250 \\  \text{Vat Price} &= 100\% + 15\% \\  &= 115\% \times \$1250 \\  &= \frac{115}{100} \times \frac{1250}{1} \\  &= \$1437.50  \end{aligned}  $	
34.	<p>Jason went to school with 46 marbles. He won as many as he went to school with, but then lost 18. How many marbles does Jason now have?</p> <p>Answer: _____ (3)</p>	$  \begin{aligned}  \text{Jason now has} &= (46 \times 2) - 18 \\  &= 92 - 18 \\  &= \mathbf{74 \text{ marbles}}  \end{aligned}  $	
35.	<p>Susan left home at the time shown on the clock below.</p> <p>She arrived at school 45 minutes later.</p> <p>(a) On the clock shown below draw the MINUTE hand to show the time she reached to school.</p> <div data-bbox="220 1050 545 1360" data-label="Image"> </div> <p>(1)</p> <p>(b) Through what angle did the minute hand turn?</p> <p>Answer: _____ degrees (2)</p>	<p>(a)</p> <div data-bbox="997 861 1253 1104" data-label="Image"> </div> <p>(b) 1 space = <math>30^0</math>  9 spaces = <math>30^0 \times 9</math>  = <math>270^0</math></p>	

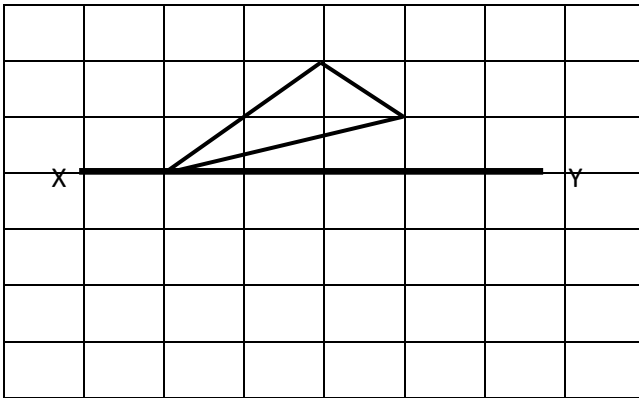
36. The triangle below is an equilateral triangle.  
Draw the lines of symmetry.



(3)



- 37.



The line XY is a mirror line.

a) Draw the image of the shape on the grid above.

Answer:

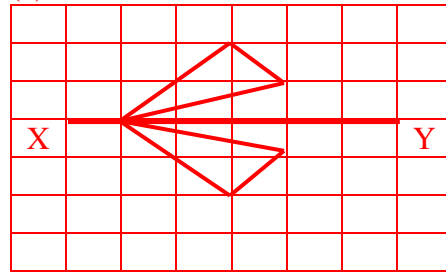
(2)

b) Name the movement.


Answer: \_\_\_\_\_

(1)

(a)



(b) **Flip or reflection along the mirror line XY**

38.	<p>The cup below is <math>\frac{2}{3}</math> filled. It will take another 80 millilitres to fill the cup.</p>  <p>a) How much liquid can this cup hold?</p> <p>Answer: _____ ml (2)</p> <p>b) How many milliliters of water will the cup have when it is half- filled?</p> <p>Answer: _____ ml (1)</p>	<p>(a) If <math>\frac{2}{3}</math> is filled, then <math>\frac{1}{3}</math> is not filled</p> $\therefore \frac{1}{3} = 80\text{ml}$ $1 = 80 \times 3$ $= \mathbf{240\text{ml}}$ <p>(b) Half –filled = <math>240 \div 2</math></p> $= \mathbf{120\text{ml}}$	
39.	<p>Aaron travelled 0.75 of the distance by car and walked the rest to reach to the market.</p> <p>(a) What fraction of the distance did Aaron walk?</p> <p>Answer _____ (1)</p> <p>(b) Aaron lives 40 km from the market. What distance did he travel by car?</p> <p>Answer: _____ (2)</p>	<p>(a) Walk = <math>1.00 - 0.75</math></p> $= 0.25$ $= \frac{1}{4}$ <p>(b) Car = <math>\frac{3}{4} \times \frac{40}{1}</math></p> $= \mathbf{30 \text{ km}}$	
40.	<p>Karen spent <math>\frac{1}{5}</math> of her money to purchase a pen and then half of the balance on snacks. What fraction of her money is left?</p> <p>Answer: _____ (2)</p>	<p>Spent = <math>\frac{1}{5}</math></p> <p>Balance = <math>\frac{4}{5}</math></p> <p>Snacks = <math>\frac{1}{2} \times \frac{4}{5}</math></p> $= \frac{2}{5}$ <p><math>\therefore</math> Left with = <math>1 - (\frac{2}{5} + \frac{1}{5})</math></p> $= 1 - \frac{3}{5}$ $= \frac{2}{5}$	

### SECTION 3

**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

41.

Sara bought the following ingredients to make a cake.

Ingredients	Quantity	Unit Cost	Total Cost
Flour	$2\frac{1}{2}$ kgs	\$ 2.00 per kg	<div style="border: 1px solid black; width: 50px; height: 20px; display: inline-block;"></div>
Eggs	2 dozens	\$ <div style="border: 1px solid black; width: 50px; height: 20px; display: inline-block;"></div>	\$32.00
Sugar	<div style="border: 1px solid black; width: 50px; height: 20px; display: inline-block;"></div> kgs	3.50 per kg	\$14.00

a) How much did Sara pay for the  $2\frac{1}{2}$  kgs of flour?

Answer: \_\_\_\_\_ (1)

b) What is the cost of one dozen of eggs?

Answer: \_\_\_\_\_ (1)

c) How much sugar did she buy?

Answer: \_\_\_\_\_ (1)

d) These ingredients will make 4 cakes.  
How much will it cost to make 8 such cakes?

Answer: \_\_\_\_\_ (2)

(a)  $2.5 \times \$2 = \$5.00$

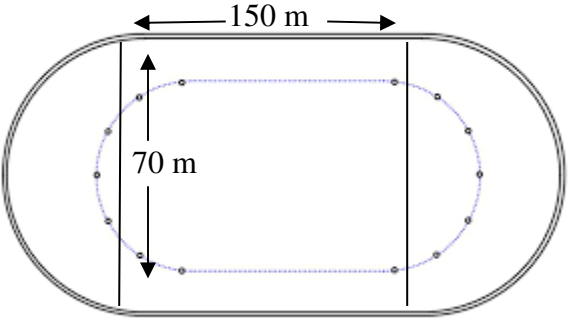
(b)  $2 \text{ doz. eggs} = \$32.00$   
 $1 \text{ doz.} = \$32.00 \div 2$   
 $= \$16.00$

(c)  $\$14.00 \div \$3.50$   
 $= \frac{1400}{350}$   
 $= 4 \text{ kgs}$

(d)  $4 \text{ cakes} = \$5 + \$32 + \$14$   
 $= \$51$

$\therefore 8 \text{ cakes} = \$51 \times 2$   
 $= \$102$

42.	<p>In one day Amelia made 15 shirts, while Andrew made 20 more than Amelia.</p> <p>a) How many shirts did they both make altogether in one day?</p> <p>Answer: _____ (1)</p> <p>b) They both worked for 5 days per week. How many shirts will they both make in one week.</p> <p>Answer: _____ (2)</p> <p>c) They both made 700 shirts. How many days did it take them to do so?</p> <p>Answer: _____ (2)</p>	<p>(a) Amelia = 15      Andrew = 35</p> <p>1 day = 15 + 35 = <b>50 shirts</b></p> <p>(b) 5 days = 50 x 5 = <b>250 shirts</b></p> <p>(c) Made = 700 shirts No. of days taken = 700 ÷ 50 = <b>14 days</b></p>	
43.	<p>Ravi sold 20% of his marbles. He gave his friend 40%, and he remained with 60 marbles.</p> <p>a) How many Marbles did Ravi have at first?</p> <p>Answer: _____ (3)</p> <p>b) How many marbles did Ravi give his friend?</p> <p>Answer: _____ (2)</p>	<p>(a)</p> <p>Remainder = 100% - (40% + 20%) = 100% - 60% = 40% or <math>\frac{2}{5}</math></p> <p><math>\frac{2}{5} = 60</math> <math>1 = \frac{60}{1} \times \frac{5}{2}</math> = <b>150 marbles</b></p> <p>(b) Friend = 40% x 150 = .4 x 150 = <b>60 marbles</b></p>	
44.	<p>Harry walked around a rectangular savannah. The length of the savannah is 70m and has a width of 35 m.</p> <p>a) If he walked around the savannah once, what distance would he have walked?</p> <p>Answer _____ (2)</p> <p>b) What is the area of the savannah ?</p> <p>Answer: _____ (3)</p>	<p>(a) Perimeter of rect. = 2L + 2W = (70 x 2) + (35 x 2) = 140 + 70 = <b>210m</b></p> <p>(b) Area of rect. = L x W = 70 x 35 = <b>2450m<sup>2</sup></b></p>	

45.	<p>Sandra works from 9:00 a.m to 6:00 p.m from Monday to Friday each week at a rate of \$15.00 per hour.</p> <p>a) What is her daily wage?</p> <p>Answer:_____ (2)</p> <p>b) What is her weekly wage?</p> <p>Answer:_____ (1)</p> <p>c) What is her monthly wage?</p> <p>Answer:_____ (2)</p>	<p>(a) <math>9:00 - 6:00 = 9</math> hours  <math>1 \text{ hr.} = \\$15</math>  <math>9 \text{ hrs.} = \\$15 \times 9</math>  <b>Daily wage = \$135</b></p> <p>(b) <math>1 \text{ day} = \\$135</math>  <math>5 \text{ days} = \\$135 \times 5</math>  <b>Weekly wage = \$675</b></p> <p>(c) <math>1 \text{ week} = \\$675</math>  <math>4 \text{ weeks} = \\$675 \times 4</math>  <b>Monthly wage = \$2700</b></p>	
46.	 <p>The above diagram is the outline of a race track.</p> <p>a) Calculate the distance around the field.</p> <p>Answer: _____m (2)</p> <p>b) In a long distance race each athlete must make 5 laps.</p> <p>What is the total distance each athlete will cover in kilometers?</p> <p>Answer: _____km (3)</p>	<p>(a) <math>\text{Circumference} = D \times \pi</math>  <math>= \frac{70}{1} \times \frac{22}{7}</math>  <math>= 220\text{m}</math></p> <p><math>\text{Distance around} = 150 + 150 + 220</math>  <math>= 520\text{m}</math></p> <p>(b) <math>1 \text{ lap} = 520</math>  <math>5 \text{ laps} = 520 \times 5</math>  <math>= 2600\text{m} \div 100</math>  <math>= 2.6\text{km}</math></p>	
	<b>END OF TEST 8</b>		

# TEST

# 9

# MATHEMATICS TEST 9


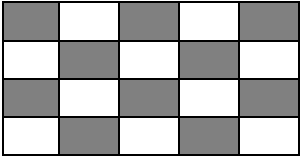
# TIME- 75 MINUTES


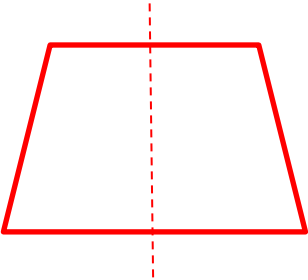
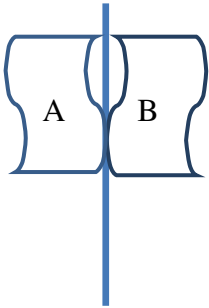
## SECTION 1

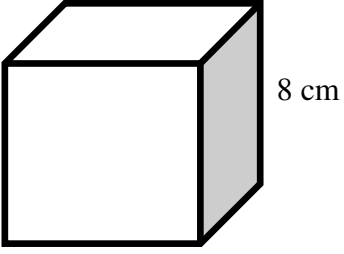
**Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
1.	Which digit is in the tens of thousands place in the number 378 412 ?  Answer:_____	7	
2.	Use > , < or = to correctly complete the statement below.  450 ones <input type="text"/> 45 tens  Answer:_____	=	
3.	What is the value of the 8 in the numeral 372.86  Answer:_____	$\frac{8}{10}$	
4.	Approximate 5832 to the nearest thousand.  Answer:_____	$5832 \approx 6000$	
5.	What number is missing from the box below?  $8\frac{4}{9} + 3 = 7\frac{2}{9} + \square$  Answer:_____	$8\frac{4}{9} + 3 = 11\frac{4}{9}$ $11\frac{4}{9} - 7\frac{2}{9}$ $= 4\frac{2}{9}$	

6.	Complete the table below. <table><tr><th>Common Fraction</th><th>Decimal Fraction</th><th>Percentage</th></tr><tr><td><math>\frac{5}{6}</math></td><td></td><td><math>83\frac{1}{3}\%</math></td></tr></table> Answer:_____	Common Fraction	Decimal Fraction	Percentage	$\frac{5}{6}$		$83\frac{1}{3}\%$	$\frac{5}{6} = 5 \div 6$ $= \mathbf{0.833}$	
Common Fraction	Decimal Fraction	Percentage							
$\frac{5}{6}$		$83\frac{1}{3}\%$							
7.	Write the number for the following expansion. $(5 \times 1000) + (3 \times 100) + (8 \times \frac{1}{100}) =$  Answer:_____	$5000 + 3 + +.08$ $= \mathbf{5300.08}$							
8.	Calculate the value of X in the equation below. $X + 36 = 86\frac{1}{2} - 12\frac{1}{2}$  Answer:_____	$X + 36 = 86\frac{1}{2} - 12 - \frac{1}{2}$ $X + 36 = 74$ $X = 74 - 36$ $X = \mathbf{38}$							
9.	Complete the sequence of fractions below. $\frac{1}{12}, \frac{1}{8}, \frac{4}{12}, \frac{2}{8}, \frac{8}{12}, \boxed{\phantom{00}}$  Answer:_____	$\mathbf{\frac{3}{8}}$							
10.	$\frac{1}{3}$ of a number is 48.What is the number?  Answer:_____	$\frac{1}{3} = 48$ $1 = 48 \times 3$ $= \mathbf{144}$							


11.	<p>Calculate the value of</p> $\diamond^2 - \triangle \times 2 =$ <p>If <math>\diamond = 6</math> and <math>\triangle = 5</math></p> <p>Answer: _____</p>	$6^2 - (5 \times 2)$ $= 36 - 10$ $= 26$	
12.	<p>What is the product of 372 and 25?</p> <p>Answer: _____</p>	<p><b>9300</b></p>	
13.	 <p>25cm</p> <p>12cm</p> <p>What is the perimeter of the shape above?</p> <p>Answer: _____</p>	<p>Perimeter of rect. = <math>2L + 2W</math></p> $= (25 \times 2) + (12 \times 2)$ $= 50 + 24$ $= 74\text{cm}$	
14.	<p>Find the area of the shaded part of the shape below.</p>  <p>(1cm grid)</p> <p>Answer: _____</p>	<p>Area of shaded part = <b><math>10\text{cm}^2</math></b></p>	

15.	<p>The mean of two numbers is 46. One of the numbers is 54. What is the other number?</p> <p>Answer:_____</p>	<p>Mean = <math>46 \times 2</math>  Total = 92  Other number = <math>92 - 54</math>  = <b>38</b></p>	
16.	<p>How many lines of symmetry are there in the shape below.</p>  <p>Answer:_____</p>	<p><b>One</b></p> 	
17.	 <p>Mirror Line</p> <p>What is the name of the movement made by the shape from position A to position B?</p> <p>Answer:_____</p>	<p><b>Flip or Reflection</b></p>	

18.	<p>What is the most appropriate unit for measuring the weight of a pencil?</p> <p>Answer:_____</p>	<b>Grams</b>	
19.	<p>Calculate the volume of the cube below.</p>  <p>Answer:_____</p>	<p>Volume of cube = <math>S \times S \times S</math>  <math>= 8 \times 8 \times 8</math>  <math>= 512\text{cm}^3</math></p>	
20.	<p>Name the shape that is made up of four triangular faces and one square face.</p> <p>Answer:_____</p>	<b>Square-Based Pyramid</b>	

## SECTION 2

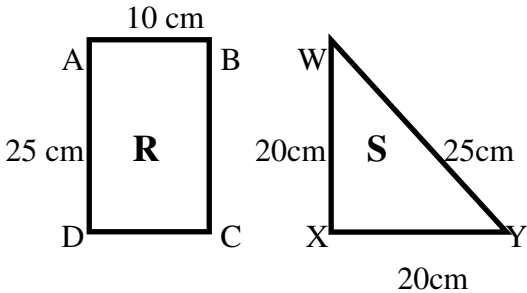
**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

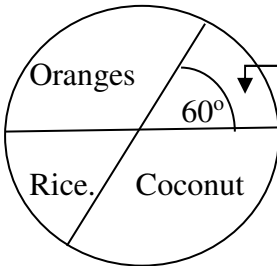
No.	Items	Working Column	Marks
21.	<p>A piece of cloth is cut into 30 pieces. Each piece measures <math>\frac{3}{5}</math> m long. Calculate the total length of the piece of cloth.</p>  <p>Answer: _____ m (2)</p>	$1 \text{ pc} = \frac{3}{5} \text{ m}$ $30 \text{ pcs} = \frac{3}{5} \times \frac{30}{1}$ $= 18\text{m}$	
22.	<p>If 220 is <math>\frac{4}{5}</math> of a school's population, what is the school's total population?</p> <p>Answer: _____ pupils (2)</p>	$\frac{4}{5} = 220$ $1 = \frac{220}{1} \times \frac{5}{4}$ $= 275 \text{ pupils}$	
23.	<p>In an office there is accommodation for EXACTLY 280 people. There are tables that seat either 5 or 6 persons. If there are 20 tables that seat 5 people each, how many tables are there that seat 6 persons if ALL spaces are occupied?</p> <p>Answer: _____ tables (2)</p>	<p>Total = 280 persons</p> <p>5 seaters = <math>20 \times 5</math> = 100</p> <p><math>\therefore</math> 4 seaters = <math>(280 - 100) \div 6</math> = <math>180 \div 6</math> = 30 tables</p>	
24.	<p>Jason walks 320 metres and jogs 3.85 kilometres every morning. What is the total distance in kilometres that Jason covers every morning?</p> <p>Answer: _____ km (2)</p>	$320 \text{ m} = .320 \text{ km} + 3.85 \text{ km}$ $= 4.17 \text{ km}$	

25.	<p>Karen has 16 yellow, 14 blue , 12 green and 20 red balls.</p> <p>What fraction of the balls were yellow and blue together?</p> <p>Answer:_____ (2)</p>	$\text{Total} = 16 + 14 + 12 + 20$ $= 62$ $\text{Yellow} + \text{Blue} = \frac{30}{42}$ $= \frac{5}{7}$	
26.	<p>A book and a ruler weigh 400g. The book makes up 60% of the weight.</p> <p>a) What is the weight of the book?</p> <p>Answer:_____ (1)</p> <p>b) What fraction of the weight is the ruler?</p> <p>Answer:_____ (2)</p>	<p>(a) <math>60\% \times 400\text{g} = 0.6 \times 400</math></p> $= 240\text{g}$ <p>(b) If book = 60%, then ruler = 40%</p> $40\% = \frac{2}{5}$	
27.	<p>Kelsie gave <math>\frac{3}{8}</math> of her coloured pencils to her cousin and <math>\frac{3}{5}</math> to her brother. She kept the remainder. What fraction of the coloured pencils did she keep?</p> <p>Answer:_____ (3)</p>	$\text{Kept} = 1 - \left[ \frac{3}{8} + \frac{3}{5} \right]$ $= 1 - \frac{39}{40}$ $= \frac{1}{40}$	
28.	<p>Anya has 80 plums in a bag. She gave 0.25 of them to Johann and <math>\frac{1}{3}</math> of the remainder to Sally. How many plums are left in the bag?</p> <p>Answer:_____ (3)</p>	$\text{Johann} = 0.25 \times 80$ $= 20 \text{ plums}$ $\text{Remainder} = 80 - 20$ $= 60 \text{ plums}$ $\text{Sally} = \frac{1}{3} \times \frac{60}{1}$ $= 20 \text{ plums}$ $\text{Left in bag} = 80 - (20 + 20)$ $= 80 - 40$ $= 40 \text{ plums}$	

29.	<p>Mr. David shared 90 stickers between 2 students in the class. Aaron got 14 more than Sam. How many stickers did Aaron get?</p> <p>Answer:_____ (2)</p>	$90 - 14 = 76$ $76 \div 2 = 38$ $\text{Aaron} = 38 + 14$ $= \mathbf{52 \text{ stickers}}$	
30.	<div data-bbox="347 606 699 957" data-label="Diagram"> </div> <p>Ravi was facing southwest. He turned <b>CLOCKWISE</b> until he was facing southeast. Through how many degrees did he turn?</p> <p>Answer:_____ (2)</p>	$8 \text{ spaces} = 360^{\circ}$ $1 \text{ space} = 360^{\circ} \div 8$ $= 45^{\circ}$ $\text{Ravi moved} = 6 \text{ spaces}$ $\therefore \text{he turned} = 6 \times 45^{\circ}$ $= \mathbf{270^{\circ}}$	

<p><b>31.</b></p>	<div data-bbox="368 247 755 525"> </div> <p>a) Draw the reflection of the figure shown above.</p> <p>Answer: _____ (1)</p> <p>b) Name the combined figure.</p> <p>Answer: _____ (1)</p>	<p>(a)</p> <div data-bbox="899 237 1245 499"> </div> <p>(b) Square</p>
<p><b>32.</b></p>	<p>There are 700 pupils in a school. If there are 74 more boys than girls, calculate how many boys and girls are in the school.</p> <p>Answer: _____ BOYS _____ GIRLS (3)</p>	$  \begin{aligned}  700 - 74 &= 626 \\  626 \div 2 &= \mathbf{313 \text{ Girls}} \\  \text{Boys} &= 313 + 74 \\  &= \mathbf{387 \text{ boys}}  \end{aligned}  $
<p><b>33.</b></p>	<p>There are 560 workers employed in a gas company. The number of workers will increase by 20% in the next year. How many workers will be needed next year?</p> <p>Answer: _____ workers (3)</p>	$  \begin{aligned}  \text{Next year} &= 100\% + 20\% \\  &= 120\% \\  \frac{120}{100} \times \frac{560}{1} &= \mathbf{672 \text{ workers}}  \end{aligned}  $

34.	<p>Aunt Sal used 5.75 litres of juice-concentrate and 3.5 litres of water to make a bucket of juice. How many litres of liquid will be needed in all to make 5 buckets of the same juice?</p> <p>Answer: _____ (3)</p>	$1 \text{ bucket} = 5.75 + 3.5$ $= 9.25 \text{ l}$ $5 \text{ buckets} = 9.25 \times 5$ $= \mathbf{46.25 \text{ l}}$	
35.	 <p>The figures above represent a rectangle, R and a triangle S. Which of the two figures have the greater area?</p> <p>Answer: _____ (3)</p>	$\text{Area of rect.} = L \times W$ $= 25 \times 10$ $= 250 \text{ cm}^2$ $\text{Area of triangle} = \frac{B \times H}{2}$ $= \frac{20 \times 20}{2}$ $= 200 \text{ cm}^2$ <p><b><math>\therefore</math> R has the greater area</b></p>	
36.	<p>Tomato plants are planted 1.5 metres apart. The distance between the first plant and the last plant is 39 metres. How many tomato plants were planted?</p> <p>Answer: _____ plants (2)</p>	$39 \div 1.5$ $= 26 + 1$ $= \mathbf{27 \text{ plants}}$	
37.	<p>Chris works from 8:00a.m. to 4:00p.m. from Monday to Friday. He is paid \$16.00 per hour. Each over time hour is paid at time and a half. What is Chris's total weekly wage if he works 10 hours overtime for the week?</p> <p>Answer: \$ _____ (3)</p>	$1 \text{ day} = 8 \text{ hours}$ $1 \text{ week} = 8 \times 5$ $= 40 \text{ hours}$ $\text{Basic Wage} = 40 \times 16$ $= \$640$ $\text{Overtime} = 10 \times [1\frac{1}{2} \times 16]$ $= 10 \times [\frac{3}{2} \times \frac{16}{1}]$ $= 10 \times 24$ $= \$240$ $\text{Total } \$640 + \$240$ $= \mathbf{\$880}$	

38.	<p>Complete the table below:</p> <table><thead><tr><th></th><th>Plane Shape</th><th>No. of sides</th><th>No. of pairs of equal sides</th></tr></thead><tbody><tr><td>a)</td><td>Rhombus</td><td>4</td><td></td></tr><tr><td>b)</td><td>Isosceles Triangle</td><td>3</td><td></td></tr><tr><td>c)</td><td>Parallelogram</td><td></td><td>2</td></tr></tbody></table> <p>Answer: _____ (3)</p>		Plane Shape	No. of sides	No. of pairs of equal sides	a)	Rhombus	4		b)	Isosceles Triangle	3		c)	Parallelogram		2	<p>(a) 2 pairs (b) 1 pair (c) 4 sides</p>	
	Plane Shape	No. of sides	No. of pairs of equal sides																
a)	Rhombus	4																	
b)	Isosceles Triangle	3																	
c)	Parallelogram		2																
39.	<div></div> <p>The pie chart shows how 420 acres of land were divided into four crop areas. 60° represents the amount of land used to plant Bananas.</p> <p>How many acres of land were used to plant Bananas?</p> <p>Answer: _____ acres (3)</p>	<p><math display="block">\text{Bananas} = \frac{60}{360} \times \frac{420}{1}</math> <b>= 70 acres</b></p>																	

40.

The table below shows Melia's savings for one week.

Day of Week	Amount saved
Monday	\$1.75
Tuesday	\$1.00
Wednesday	\$2.00
Thursday	\$1.00
Friday	\$1.00

Calculate her mean savings per day.

Answer: \_\_\_\_\_ (2)

$$\begin{aligned}
 \text{Mean} &= \frac{\text{Sum}}{N(n)} \\
 &= \frac{1.75 + 1.00 + 2.00 + 1.00 + 1.00}{5} \\
 &= \frac{\$6.75}{5} \\
 &= \$1.35
 \end{aligned}$$

### SECTION 3

**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

<p><b>41.</b></p>	<p>In a church, 50% of the people attending were women.</p> <p>There were 300 women, 150 men, 90 boys and the rest were girls.</p> <p>(a) How many girls attend church?</p> <p>Answer : _____ (2)</p> <p>(b) Calculate the total number of people attending the church.</p> <p>Answer: _____ (1)</p> <p>(c) What percent of the people at church were girls?</p> <p>Answer: _____ (2)</p>	<p>(a) <math>50\% = 300</math>  <math>\therefore 150 + 90 + G = 300</math>  <math>240 + G = 300</math>  <math>G = 300 - 240</math>  <math>= 60 \text{ girls}</math></p> <p>(b) Total no. of persons = <math>300 \times 2</math>  <math>= 600</math></p> <p>(c) Girls = <math>\frac{60}{600} \times \frac{100}{1}</math>  <math>= 10\%</math></p>	
<p><b>42.</b></p>	<p>In the year 2009, Mary was 15 years old. In 2015 Mary would be three times as old as her cousin Sam.</p> <p>(a) Calculate Sam's age in 2009.</p> <p>Answer: _____ (2)</p> <p>(b) In what year was Mary born?</p> <p>Answer: _____ (1)</p> <p>(c) What would be the total of Mary and Sam's age in 2015?</p> <p>Answer: _____ (2)</p>	<p>(a) <math>2009 = 15 \text{ years}</math>  <math>2015 = 15 + 6</math>  <math>= 21 \text{ years}</math></p> <p>Sam's age in 2015 = <math>21 \div 3</math>  <math>= 7 \text{ years}</math>          Sam's age in 2009 = <math>7 - 6</math>  <math>= 1 \text{ year}</math></p> <p>(b) <math>2009 - 15 = 1994</math></p> <p>(c) Mary + Sam = <math>21 + 7</math>  <math>= 28 \text{ years}</math></p>	

43.	<p>Glen borrowed \$12 000 from the Credit Union at a rate of 6% per annum for a period of 5 years.</p> <p>(a) Calculate the interest he would have to pay on the loan.</p> <p>Answer: _____ (2)</p> <p>(b) How much would he have to repay the Credit Union?</p> <p>Answer: _____ (1)</p> <p>(c) What would be Glen's monthly installment?</p> <p>Answer: _____ (2)</p>	<p>(a) Simple Interest = <math>\frac{P \times R \times T}{100}</math></p> <p><math>= \frac{12000 \times 6 \times 5}{100}</math></p> <p><b>= \$3600</b></p> <p>(b) Amount = \$ 12000 + \$3600</p> <p><b>= \$ 15600</b></p> <p>(c) Glen's monthly installment</p> <p>No. of months = 12 x 5</p> <p><b>= 60 months</b></p> <p>Installments = <math>\frac{\text{Amount}}{\text{No. of mths.}}</math></p> <p><math>= \frac{\\$15600}{60}</math></p> <p><b>= \$ 260</b></p>	
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44.



(a) If the long hand of the clock moves  $120^\circ$  in an ANTI-CLOCKWISE direction, to which number will it now point?

Answer: \_\_\_\_\_ (2)

(b) How many degrees would the long hand turn if it moved from 7 to 11 in a clockwise direction?

Answer: \_\_\_\_\_ (2)

(c) To which number would the long hand point if it made a COMPLETE turn?

Answer: \_\_\_\_\_ (1)

(a)  $120^\circ = 4 \text{ spaces } (120 \div 30)$

$7 - 4 = 3$

**The long hand will point to 3**

(b)  $4 \text{ spaces} = 30^\circ \times 4$

**$= 120^\circ$**

(c) **7**

45.	<p>A worker needs to tile a kitchen floor which is 12m long by 7.5m wide.</p> <p>(a) What is the area of the floor to be tiled ?</p> <p>Answer: _____ (2)</p> <p>(b) What is the area of a tile if each tile is a square with a side of 30cm.</p> <p>Answer: _____ (2)</p> <p>(c) How many such tiles would the worker need to tile the kitchen floor?</p> <p>Answer: _____ (1)</p>	<p>(a) Area of floor = <math>12 \times 7.5</math> = <b><math>90\text{m}^2</math></b></p> <p>(b) Tile = <math>S \times S</math> = <math>30 \times 30</math> = <b><math>900\text{ cm}^2</math></b></p> <p>(c) <math>12\text{m} = 1200\text{ cm}</math>   <math>7.5\text{m} = 750\text{cm}</math></p> <p>No. of tiles = <math>\frac{1200 \times 750}{30 \times 30}</math>  = <b>1000 tiles</b></p>	
46.	<p>Mr. Taylor has a bag with crayons. There are 320 crayons in the bag. Forty percent of them are blue, <math>\frac{1}{4}</math> of the remainder are purple, and the others are orange.</p> <p>a) How many blue crayons are in the bag?</p> <p>Answer: _____ (1)</p> <p>b) What percentage of the crayons is purple?</p> <p>Answer: _____ (2)</p> <p>c) What fraction of the crayons in the bag are orange?</p> <p>Answer: _____ (1)</p>	<p>(a) Blue = <math>40\% \times 320</math> = <math>0.4 \times 320</math> = <b>128 blue crayons</b></p> <p>(b) Remainder = <math>320 - 128</math> = 192</p> <p>Purple = <math>\frac{1}{4} \times \frac{192}{1}</math> = 48</p> <p>Percentage Purple = <math>\frac{48}{320} \times \frac{100}{1}</math>  = <b>15%</b></p> <p>(c) Orange = <math>100\% - [40 + 15]</math> = <math>100\% - 55\%</math> = 45%</p> <p>= <math>\frac{9}{20}</math></p>	
	<b>END OF TEST 9</b>		

# TEST

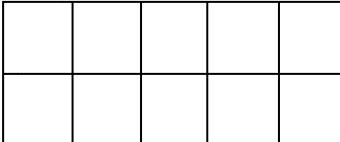
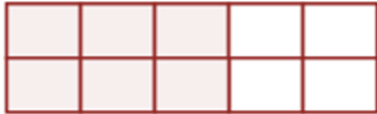

# 10

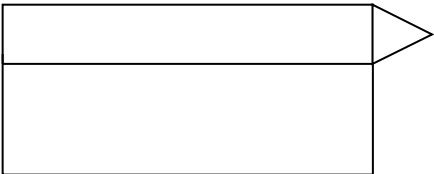

# MATHEMATICS TEST 10



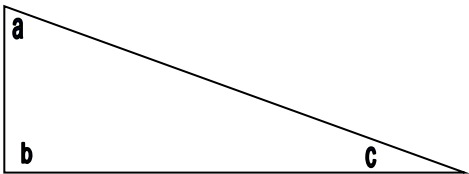
# TIME- 75 MINUTES

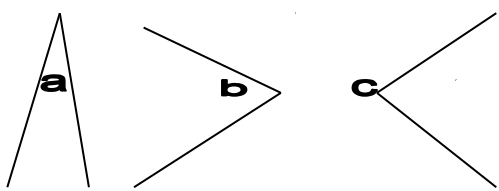




























## SECTION 1

Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Marks
1.	<p>Write the value of the <b>3</b> in the number 234 197.</p> <p>Answer: _____</p>	30 000	
2.	<p>Shade 60% of the shape below.</p> 		
3.	<p>Write the <b>LARGEST</b> number using all the digits below to make a number exactly divisible by 5.</p> <p>5    4    7    3</p> <p>Answer: _____</p>	7435	
4.	<p>What is the <b>PLACE VALUE</b> of the digit <b>8</b> in the number 415. 82?</p> <p>Answer: _____</p>	$\frac{8}{10}$	
5.	<p>What is the length of the object shown?</p>  <p>Answer: _____</p>	5cm	

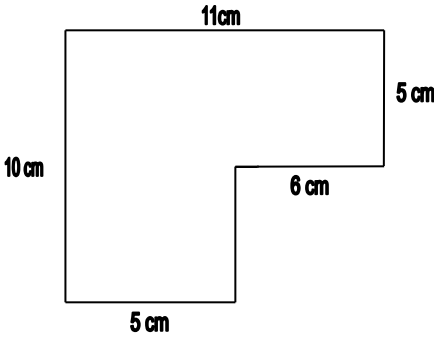
6.	<p>Write the following fractions in order of size.</p> <p>Start with the SMALLEST</p> $\frac{3}{10} \quad \frac{7}{20} \quad \frac{1}{5}$ <p>Answer: _____</p>	$\frac{1}{5} \quad \frac{3}{10} \quad \frac{7}{20}$	
7.	<p>Calculate 25% of 124</p> <p>Answer: _____</p>	$\frac{1}{4} \times 124 = 31$	
8.	<p>Add <math>3\frac{1}{4}</math> and <math>5\frac{4}{5}</math></p> <p>Answer: _____</p>	$9\frac{1}{20}$	
9.	<p>Complete the net of the triangular prism.</p> 		
10	<p>Jane sold 43 stamps. She has 71 stamps remaining. How many stamps had Jane at first?</p> <p>Answer: _____</p>	$\text{Total} = 43 + 71 = 114$	
11.	<p><math>4\frac{3}{4}</math> km = _____ m</p> <p>Answer: _____</p>	$4750 \text{ m}$	

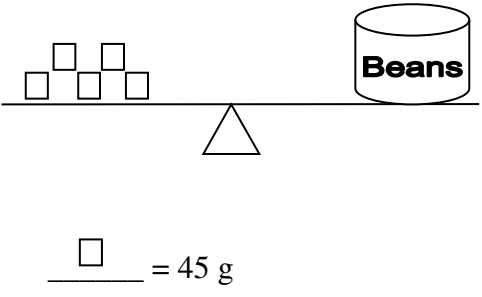
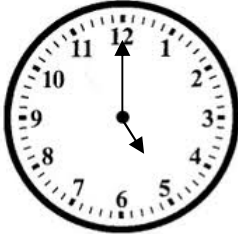
12.	<p>Mr. Khan bought a bag for \$175.00 and sold it for \$149.00. Calculate his loss.</p> <p>Answer: _____</p>	<p><b>Loss = \$ 175 - \$149</b> <b>= \$ 26</b></p>	
13.	<p>Write the time shown in digital notation.</p>  <p>Answer : _____</p>	<p><b>4:55</b></p>	
14.	<p>Calculate the area of the rectangle below.</p> <p>12 m</p>  <p>4 m</p> <p>Answer: _____</p>	<p><b>Area of rect. = L x W</b> <b>= 12 x 4</b> <b>= 48m<sup>2</sup></b></p>	
15.	 <p>Order the angles a, b, c according to the size from <b>LARGEST</b> to <b>SMALLEST</b>.</p> <p>Answer: _____</p>	<p><b>b, a, c</b></p>	
16.	<p>Name an appropriate metric unit for measuring the height of a doorway.</p> <p>Answer: _____</p>	<p><b>Metre</b></p>	

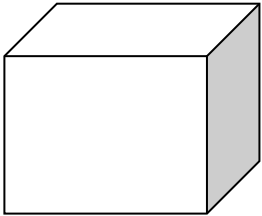
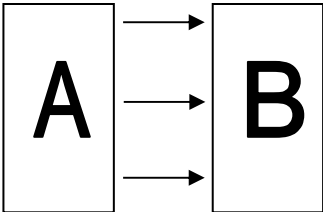
17.	<div><div><div>\$10</div><div>\$50</div><div>_____</div></div><div><div>\$5</div><div>_____</div><div>\$20</div></div><div><div>\$20</div><div>\$5</div><div>\$10</div></div></div> <p>Write the dollar bills that are missing above to get a total of \$135.00.</p> <p>Answer: _____</p>	<div>Missing Quantity = <math>135 - ( 10 + 50 + 5 + 20 + 20 + 50 + 10)</math></div> <div><math>= 135 - 120</math></div> <div><math>= \\$ 15</math></div>							
18.	<div></div> <p>Which of the above angles is a reflex angle?</p> <p>Answer: _____</p>	<div>C</div>							
19.	<p>A bag with 45kg of onions was divided into smaller bags each weighing 4.5kg. How many bags were obtained?</p> <p>Answer: _____</p>	<div><math>45 \div 4.5</math></div> <div><math>= 450 \div 45</math></div> <div><math>= 10 \text{ bags}</math></div>							
20.	<p>The pictograph below shows the number of pupils who eat fruits in each Std. 1 class.</p> <table><tr><td>1A</td><td>  </td></tr><tr><td>1B</td><td>   </td></tr><tr><td>1C</td><td> </td></tr></table> <div> = 7 pupils</div> <p>How many pupils are in Std. 1?</p> <p>Answer: _____</p>	1A	  	1B	   	1C	 	<div><math>9 \times 7 = 63 \text{ pupils}</math></div>	
1A	  								
1B	   								
1C	 								

## SECTION 2

**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
21.	Calculate $5\frac{3}{8} - 2\frac{1}{2}$  Answer: _____(2)	$5\frac{3}{8} - 2\frac{1}{2}$ $3\frac{2}{2} \frac{3+8}{8} - 4$ $2\frac{11}{8} - 4 = 2\frac{7}{8}$	
22.	$\frac{3}{5}$ of a number of marbles is 60. What then is $1\frac{1}{2}$ times the number of marbles?  Answer: _____(2)	$\frac{3}{5} = 60$ $1 = 60 \times \frac{5}{3}$ $= 100$ $1\frac{1}{2} = 100 \times 1.5$ $= 150 \text{ marbles}$	
23.	Questions 23 & 24 are based on the compound shape below    Calculate the perimeter of the compound shape.  Answer: _____(2)	$\text{Perimeter of shape} = 11 + 5 + 6 + 5 + 5 + 10$ $= 42\text{cm}$	
24.	Calculate the area of the compound shape.  Answer: _____(2)	$\text{Area of rect.} = 11 \times 5$ $= 55\text{cm}^2$ $\text{Area of square} = 5 \times 5$ $= 25\text{cm}^2$ $\text{Area of compound shape} = 55 + 25$ $= 80\text{cm}^2$	

25.	 <p>What is the total weight of the can of beans?</p> <p>Answer: _____(2)</p>	$1 \square = 45\text{g}$ $5 \square = 45 \times 5$ $= 225\text{g}$	
26.	<p>Take <math>5\frac{3}{7}</math> from 9.</p> <p>Answer: _____(2)</p>	$9 - 5\frac{3}{7} = 3\frac{4}{7}$	
27.	 <p>The <b>long hand</b> of the of the clock moves from its present position to 7.</p> <p>(a) Through how many degrees did it move?</p> <p>Answer: _____(1)</p> <p>(b) If the long hand now makes a quarter turn, to what number is it pointing?</p> <p>Answer: _____(1)</p> <p>(c) What fraction of a whole turn did the long hand make during its two movements?</p> <p>Answer: _____(1)</p>	<p>(a) Long hand moved = 7 spaces 1 space = <math>30^\circ \times 7</math> <b>= <math>210^\circ</math></b></p> <p>(b) Pointing to 7 <math>\frac{1}{4}</math> turn = 3 spaces ( <math>90^\circ \div 3</math> )  <math>7 + 3 = 10</math> Long hand is now pointing to <b>10</b></p> <p>(c) Total spaces moved = <math>7 + 3</math> = 10 spaces  <math>\therefore \text{Fraction} = \frac{10}{12}</math>  <b>Fraction = <math>\frac{5}{6}</math></b></p>	

<p>28.</p>	<p>The volume of the cube shown is <math>27\text{cm}^3</math>.</p> <p>(a) Calculate the area of the shaded face.</p>  <p>Answer: _____(1)</p> <p>(b) How many of these cubes can fit into a larger cube of side 9 cm?</p> <p>Answer: _____(2)</p>	<p>(a) Volume of cube = <math>27\text{cm}^3</math>  Side of cube = <math>\sqrt[3]{27}</math>  = 3cm  Area of shaded face = <math>3 \times 3</math>  = <b><math>9\text{cm}^2</math></b></p> <p>(b) No. of cubes that can be fit = <math>\frac{9 \times 9 \times 9}{3 \times 3 \times 3}</math>  = <math>3 \times 3 \times 3</math>  = <b>27 cubes</b></p>	
<p>29.</p>	<p>A piece of ribbon 2.5m long is cut off from a roll 5.3m. Calculate the length of ribbon that remained.</p> <p>Answer: _____(2)</p>	<p>Length Remained = <math>5.3 - 2.5</math>  = <b>2.8m</b></p>	
<p>30.</p>	 <p>Rectangles A and B are identical rectangles measuring 6 cm long by 3 cm wide.</p> <p>(a) Rectangle A is moved to join rectangle B. Name the combined shape formed.</p> <p>Answer: _____(2)</p> <p>(b) Calculate the area of the COMBINED shape.</p> <p>Answer: _____(1)</p>	<p>(a) <b>Square</b></p> <p>(b) Area of combined shape = <math>S \times S</math>  = <math>6 \times 6</math>  = <b><math>36\text{cm}^2</math></b></p>	

31.	<p>Complete the table below.</p> <table><tr><th>SOLID</th><th>NO. of EDGES</th><th>NO. of VERTICES</th></tr><tr><td>Cube</td><td></td><td>8</td></tr><tr><td></td><td>9</td><td>6</td></tr><tr><td>Cone</td><td>1</td><td></td></tr></table> <p>(3)</p>	SOLID	NO. of EDGES	NO. of VERTICES	Cube		8		9	6	Cone	1		<table><tr><th>SOLID</th><th>NO. of EDGES</th><th>NO. of VERTICES</th></tr><tr><td>Cube</td><td>12</td><td>8</td></tr><tr><td>Triangular Prism</td><td>9</td><td>6</td></tr><tr><td>Cone</td><td>1</td><td>1</td></tr></table>	SOLID	NO. of EDGES	NO. of VERTICES	Cube	12	8	Triangular Prism	9	6	Cone	1	1	
SOLID	NO. of EDGES	NO. of VERTICES																									
Cube		8																									
	9	6																									
Cone	1																										
SOLID	NO. of EDGES	NO. of VERTICES																									
Cube	12	8																									
Triangular Prism	9	6																									
Cone	1	1																									
32.	<p>Mary bought 5 dresses at \$175.00 each and a pair of shoes for \$195.00. How much money did Mary spend?</p> <p>Answer:_____ (2)</p>	<p>5 dresses @\$175 = \$ 875 1 pair shoes = <u>\$ 195</u> <u>\$1070</u></p>																									
33.	<p>Marcus picked 352 oranges. He gave his friends <math>\frac{1}{8}</math> of the oranges and sold <math>\frac{5}{16}</math>. How many oranges did Marcus keep for himself?</p> <p>Answer:_____ (2)</p>	<p>Gave + Sold = <math>\frac{1}{8} + \frac{5}{16}</math> <math>= \frac{7}{16}</math> <math>\therefore</math> Marcus kept = <math>1 - \frac{7}{16}</math> <math>= \frac{9}{16} \times \frac{352}{1}</math> <b>kept = 198 oranges</b></p>																									
34.	<p>329 x 96 = (329 x 100) - (329 x _____)</p> <p>Complete the statement above.</p> <p>Answer:_____ (2)</p>	<p>329 x 4</p>																									

35.	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>A</b>  <b>\$3.50</b>  <b>per 500g</b>  <b>Potatoes</b> </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>B</b>  <b>\$3.00</b>  <b>per 1/4kg</b>  <b>Potatoes</b> </div> </div> <p>Shops A and B sell potatoes as shown above.</p> <p>(a) Calculate the cost of 2kg of potatoes at shop A.</p> <p>Answer: _____(1)</p> <p>(b) Which shop is selling potatoes at a cheaper price?</p> <p>Answer: _____(2)</p>	<p>(a) <math>500\text{g} = \frac{1}{2}\text{kg}</math>  If <math>\frac{1}{2}\text{kg} = \\$3.50</math>, then <math>1\text{kg} = \\$3.50 \times 2</math>  <math>1\text{kg} = \\$7.00</math>  <math>2\text{kgs} = \\$7.00 \times 2</math>  <b><math>= \\$14.00</math></b></p> <p>(b) <math>\frac{1}{4}\text{kg} = \\$3.00</math>  <math>1\text{kg} = \\$3.00 \times 4</math>  <b><math>= \\$12.00</math></b></p> <p>Shop A <math>\rightarrow 1\text{kg} = \\$7.00</math>  Shop B <math>\rightarrow 1\text{kg} = \\$12.00</math></p> <p><b>Shop A sells cheaper</b></p>	
36.	<p>A car rental company charges \$350.00 per day to rent a car. Gas for the car is \$45.00 per day. How much would it cost a customer to rent the car for one week?</p> <p>Answer: _____(3)</p>	<p>Total cost for 1 day <math>= \\$350 + \\$45</math>  <b><math>= \\$395</math></b></p> <p>Total cost for 1 week ( 7 days) <math>= \\$395 \times 7</math>  <b><math>= \\$2765</math></b></p>	
37.	<p>A rectangular lawn is 24m long by 16m wide. A swimming pool 8m in length by 4 m wide was made in a part of the lawn. What area of lawn was left?</p> <p>Answer: _____(3)</p>	<p>Area of lawn <math>= 24 \times 16</math>  <b><math>= 384\text{m}^2</math></b></p> <p>Area of swimming pool <math>= 8 \times 4</math>  <b><math>= 32\text{m}^2</math></b></p> <p>Area of lawn left <math>= 384\text{m}^2 - 32\text{m}^2</math>  <b><math>= 352\text{m}^2</math></b></p>	
38.	<p>After receiving a 15% <b>discount</b> on a handbag, Paula paid \$680. Calculate the marked price of the handbag.</p> <p>Answer: _____(3)</p>	<p>Discount <math>= 15\%</math>  Paid <math>= 85\% (100\% - 15\%)</math>  <math>85\% = \\$680</math>  <math>\frac{85}{100} = 680</math>  <math>1 = \frac{680 \times 100}{85}</math>  <b><math>= \\$800</math></b></p>	

39.	<p>Mrs. Khan bought 7 dozen eggs at \$10.00 per dozen. Eighteen eggs broke on her way home. She sold the remaining eggs for \$0.95 each. Calculate her profit or loss.</p> <p>Answer:_____ (3)</p>	<p>Cost Price = <math>\\$10 \times 7</math>  <math>= \\$70</math>          No. of eggs sold = <math>(7 \times 12) - 18</math>  <math>= 84 - 18</math>  <math>= 66</math>          Selling Price = <math>66 \times \\$0.95</math>  <math>= \\$62.70</math>  <b>Selling Price &lt; Cost Price = Loss</b>          Loss = <math>\\$70.00 - \\$62.70</math>  <b>Loss = \$7.30</b></p>	
40.	<p>15 posts were placed in a straight row 18m apart.</p> <p>(a) What is the distance from the first to the last post?</p> <p>Answer:_____ (2)</p> <p>(b) For a distance of 450m, how many posts will be needed?</p> <p>Answer:_____ (1)</p>	<p>(a) <math>15 - 1 = 14</math>  <math>14 \times 18 = \mathbf{252m}</math></p> <p>(b) <math>450m \div 18 = 25</math>  <math>25 + 1 = \mathbf{26 \text{ posts}}</math></p>	

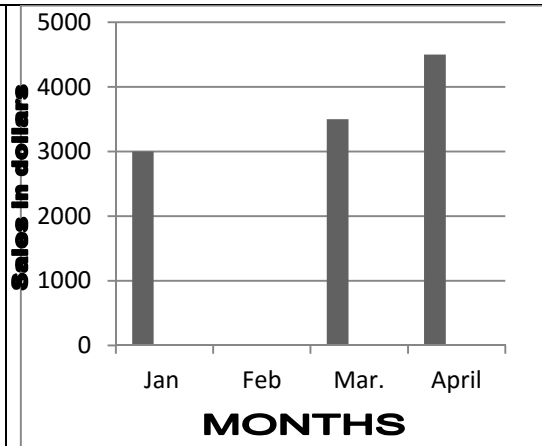
### SECTION 3

**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
41.	<p>Chelsea picked 210 mangoes. She sold <math>\frac{4}{7}</math> of it, gave her cousin <math>\frac{2}{3}</math> of the remainder and kept the rest for herself.</p> <p>(a) How many mangoes did she sell?</p> <p>Answer: _____(1)</p> <p>(b) How many mangoes did Chelsea give to her cousin?</p> <p>Answer: _____(2)</p> <p>(c) Calculate the quantity of mangoes she kept for herself.</p> <p>Answer: _____(2)</p>	<p>(a) Sold = <math>\frac{4}{7} \times \frac{210}{1}</math> = <b>120 mangoes</b></p> <p>(b) Remainder = <math>210 - 120</math> = 90 mangoes Cousin = <math>\frac{2}{3} \times \frac{90}{1}</math> = <b>60 mangoes</b></p> <p>(c) Quantity kept = <math>210 - (120 + 60)</math> = <math>210 - 180</math> = <b>30 mangoes</b></p>	
42.	<p>A wall 8m by 5m is completely covered with square tiles of side measuring 50 cm.</p> <p>Calculate:</p> <p>(a) the area of the wall.</p> <p>Answer: _____(1)</p> <p>(b) how many tiles are required to completely cover the wall?</p> <p>Answer: _____(2)</p> <p>(c) the cost of the tiles if they are sold at \$12 each plus 15% VAT.</p> <p>Answer _____(2)</p>	<p>(a) Area of wall = L x W = <math>8 \times 5</math> = <b>40 m<sup>2</sup></b></p> <p>(b) No. of tiles needed = <math>\frac{800 \times 500}{50 \times 50}</math> = <math>\frac{4000}{25}</math> = <b>160 tiles</b></p>	
43	<p>A library charges \$1.00 per book per day for returning books late. On</p>	<p>(a) Total Overdue = \$ 20 4 books = \$ 20</p>	

	<p>Tuesday 6<sup>th</sup> March, a student paid \$20 for returning 4 books late. The books were all borrowed on the same day.</p> <p>(a) How many days were the books overdue?</p> <p>Answer: _____(2)</p> <p>(b) On what day should the books have been returned to the library to avoid overdue charges?</p> <p>Answer: _____</p>	<p>1 book = \$ 20 ÷ 4 = \$ 5</p> <p>If \$1 = 1 day, Then \$5 = 5 days ∴ the books were <b>5 days overdue</b></p> <p>(b) Books should have been returned = 6<sup>th</sup> – 5 days = <b>Thursday 1<sup>st</sup> March</b></p>	
44.	Marlon's working hours:	<p>(a) Basic Wage = \$18 x 40 = <b>\$720</b></p>	

	<table><tr><th>DAYS</th><th>HOURS</th></tr><tr><td>Mon.</td><td>8</td></tr><tr><td>Tues.</td><td>8</td></tr><tr><td>Wed.</td><td>8</td></tr><tr><td>Thurs.</td><td>8</td></tr><tr><td>Fri.</td><td>15</td></tr></table> <p>Marlon is paid \$18.00 per hour for the first 40 hours and time and a half for extra hours.</p> <p>Calculate:</p> <p>(a) Marlon’s wage for the first 40 hours.</p> <p>Answer:_____ (1)</p> <p>(b) how much overtime he earned.</p> <p>Answer:_____ (2)</p> <p>(c) The total wage he receives for the five days</p> <p>Answer:_____ (2)</p>	DAYS	HOURS	Mon.	8	Tues.	8	Wed.	8	Thurs.	8	Fri.	15	<p>(b) Total no. of hours worked = 47 Overtime hours = 47 – 40 = 7 overtime hours</p> <p>Overtime wage = <math>1\frac{1}{2} \times 18</math> = <math>\frac{3}{2} \times \frac{18}{1}</math> = \$27/hr</p> <p>Total Overtime = \$27 x 7 = <b>\$189</b></p> <p>(c) Total Wage = \$720 + \$189 = <b>\$ 909</b></p>	
DAYS	HOURS														
Mon.	8														
Tues.	8														
Wed.	8														
Thurs.	8														
Fri.	15														
45.	<p>The mean sprint time for 4 races of a sprint athlete is 39 seconds. Three of his sprint times are 42, 37, and 35 seconds.</p> <p>(a) Calculate his forth sprint time.</p> <p>Answer:_____ (2)</p> <p>(b) What must be his time in the next sprint to lower his mean score to 38 seconds?</p> <p>Answer:_____ (3)</p>	<p>(a) Mean = 39 ∴ Total = 39 x 4 = 156 4<sup>th</sup> Sprint Time = 156 – ( 42 + 37 + 35) = 156 – 114 = <b>42</b></p> <p>(b) If Mean = 38 Total = 38 x5 = 190 Fifth Sprint = 190 – 156 = <b>34</b></p>													
46.		<p>(a) 4500 – 3000 = <b>\$1500</b></p>													



The incomplete bar graph shows the monthly sales of a business for the months of January to April. The mean monthly sales for the same period is \$3500.

(a) How much more was the sales in April than in January?

Answer: \_\_\_\_\_ (1)

(b) What was the total sales for the four months?

Answer: \_\_\_\_\_ (2)

(c) Complete the bar graph to show the total sales for the month of February?

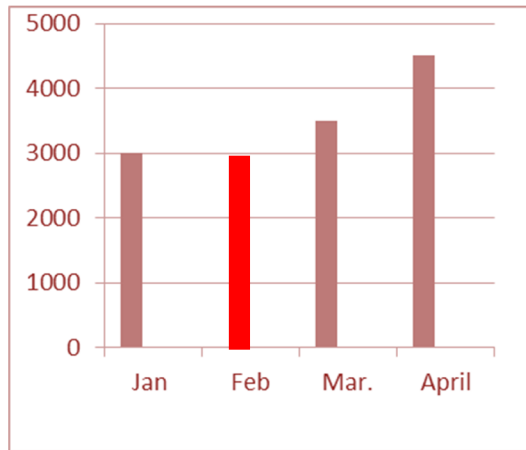
Answer: \_\_\_\_\_ (2)

$$\begin{aligned} \text{(b) Total} &= \text{Mean} \times \text{no. of mths} \\ &= \$3500 \times 4 \\ &= \mathbf{\$14\ 000} \end{aligned}$$

$$\begin{aligned} \text{(c) Jan} + \text{Mar} + \text{Apr} \\ 3000 + 3500 + 4500 \end{aligned}$$

$$= \$11\ 000$$

$$\begin{aligned} \text{February} &= \$14000 - \$11000 \\ &= \mathbf{\$3000} \end{aligned}$$



**End of Test 10**

# TEST

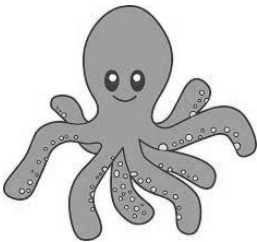
# 11

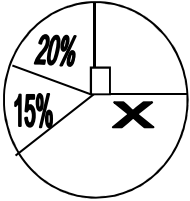

# MATHEMATICS TEST 11

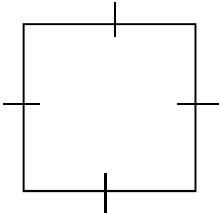
# TIME- 75 MINUTES

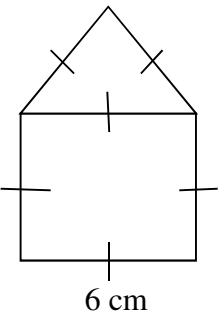
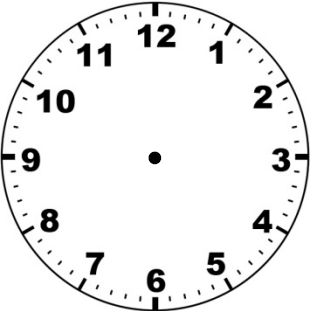

## SECTION 1

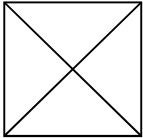
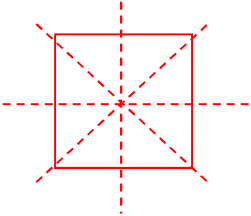
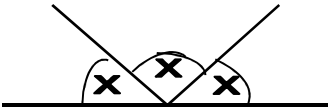
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Marks
1.	<p>Calculate the sum of 6954, 83721 and 435.</p> <p>Answer: _____</p>	<p><b>91110</b></p>	
2.	<p>Write in words: 303,003</p> <p>Answer: _____</p> <p>_____</p> <p>_____</p>	<p><b>Three hundred and three thousand and three.</b></p>	
3.	<p>An octopus has 8 arms as shown below.</p>  <p>How many arms will 16 octopuses have?</p> <p>Answer: _____ arms</p>	<p><b>1 octopus = 8 arms</b>  <b>16 octopuses = 8 x 16</b>  <b>= 128 arms</b></p>	
4.	<p>Write 83 054 to the nearest hundred.</p> <p>Answer: _____</p>	<p><b>83 054</b></p> <hr/> <p><b>83 000</b></p>	

5.	<p>Arrange the fractions below in descending order.</p> $\frac{3}{4} \quad \frac{7}{12} \quad \frac{2}{3} \quad \frac{5}{6}$ <p>Answer: _____</p>	$\frac{3}{4} \quad \frac{7}{12} \quad \frac{2}{3} \quad \frac{5}{6}$ $\frac{9}{12} \quad \frac{7}{12} \quad \frac{8}{12} \quad \frac{10}{12}$ $\frac{5}{6} \quad \frac{3}{4} \quad \frac{2}{3} \quad \frac{7}{12}$	
6.	<p>A class has 24 pupils. If on a Monday <math>\frac{1}{4}</math> was absent, how many pupils were present?</p> <p>Answer: _____</p>	<p>If Absent = <math>\frac{1}{4}</math>, then Present = <math>\frac{3}{4}</math></p> $\therefore \frac{3}{4} \times \frac{24}{1}$ <p><b>= 18 pupils present</b></p>	
7.	<p>The shape is divided as shown below.</p>  <p>What percent does x represent?</p> <p>Answer: _____</p>	$X\% = 100\% - (25\% + 20\% + 15\%)$ $= 100\% - 60\%$ $= 40\%$	
8.	<p>Calculate the VAT (15%) on a television set with a cash price of \$600.00</p>  <p>Answer: \$ _____</p>	$\text{Vat} = 15\% \times 600$ $= \frac{15}{100} \times \frac{600}{1}$ $= \$90$	

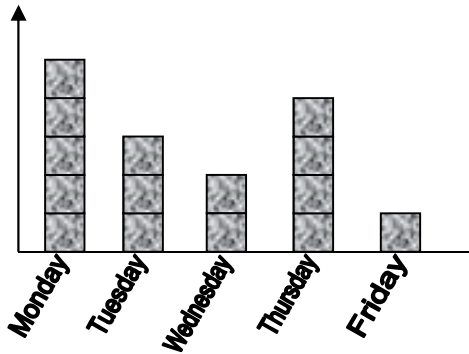
9.	<p>A rope is 3.5 m long. What is its length in centimeters?</p> <p>Answer: _____ cm</p>	$3.5\text{m} = 3.5\text{m} \times 100$ $= \mathbf{350\text{cm}}$	
10.	<p>How many 25¢ coins will Jim get in exchange for \$7.00?</p> <p>Answer: _____</p>	$\begin{aligned} \$1 &= 4 \text{ } 25\text{c} \\ \$7 &= 4 \times 25\text{c} \\ &= \mathbf{28 - 25\text{c}} \end{aligned}$	
11.	<p>The perimeter of the square below is 36cm. Calculate its area.</p>  <p>Answer: _____ cm<sup>2</sup></p>	$\begin{aligned} \text{Perimeter} &= 36\text{cm} \\ \text{Side} &= 36 \div 4 \\ &= 9\text{cm} \\ \text{Area of square} &= S \times S \\ &= 9 \times 9 \\ &= \mathbf{81\text{cm}^2} \end{aligned}$	
12.	<p>Allan bought a pen for \$13.50. He sold it for \$17.00. How much profit did he make?</p> <p>Answer: _____</p>	$\begin{aligned} \text{Profit} &= \text{S.P.} - \text{C.P} \\ &= \$17.00 - \$13.50 \\ &= \mathbf{\$3.50} \end{aligned}$	


13.	<p>The diagram below shows a compound shape made up of an equilateral triangle mounted on a square.</p>  <p>Calculate the perimeter of the above shape.</p> <p>Answer: _____</p>	<p>Peri. of shape = <math>6 + 6 + 6 + 6 + 6</math>  <math>= 30\text{cm}</math></p>	
14.	<p>The time on a digital clock is 6:55 PM. If the clock is 10 minutes slow, draw the hands in the clock to show the correct time.</p>  <p>Answer: _____</p>		
15.	<p>Sue left home at 7:30 am and returned at 2:00 pm on the same day. For how many hours was she away from home?</p> <p>Answer: _____</p>	<p><math>2:00 = 14:00</math> (24hrs)  <math>14:00 - 7:30</math>  <math>= 6:30</math>  <math>= 6\frac{1}{2} \text{ hrs}</math></p>	

16.	<p>How many more lines of symmetry can be drawn in the shape below?</p>  <p>Answer: _____</p>	<p><b>2 more lines of symmetry</b></p> 	
17.	<p>In the diagram below, the three angles labelled 'x' are equal. Calculate the value of 'x'.</p>  <p>Answer: _____ degrees</p>	<p><b> <math>3 X^{\circ} = 180^{\circ}</math>  <math>= 180^{\circ} \div 3</math>  <math>X^{\circ} = 60^{\circ}</math> </b></p>	
18.	<p>Harry is facing North. He turns <b>clockwise</b> to face East. Through how many degrees has Harry turned?</p> <p>Answer: _____ degrees.</p>	<p><b><math>\frac{1}{4}</math> turn = <math>90^{\circ}</math></b></p>	

19.

The graph below shows the number of children buying ice-cream from Monday to Friday.



 represents 12 children.

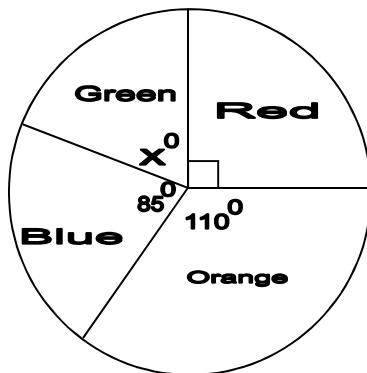
How many more children bought ice-cream on Thursday than on Tuesday?

Answer: \_\_\_\_\_

$$\begin{aligned} \text{Thursday} - \text{Tuesday} \\ 48 - 36 \\ = 12 \text{ more children} \end{aligned}$$

20.

The pie chart below shows the favourite colours of the students of Standard 4.



The angle for Green is  $x^\circ$ . Calculate the value of  $x$ .

Answer: \_\_\_\_\_<sup>0</sup>

$$\begin{aligned} X^\circ &= 360^\circ - (85^\circ + 110^\circ + 90^\circ) \\ &= 360^\circ - 285^\circ \\ &= 75^\circ \end{aligned}$$

## SECTION 2

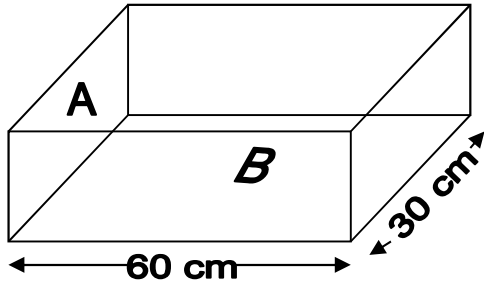
**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
21.	<p>Calculate:</p> $5\frac{3}{4} + 2\frac{5}{6}$ <p>Answer: _____ (2)</p>	$5\frac{3}{4} + 2\frac{5}{6}$ $7\frac{9}{12} + 2\frac{10}{12} = 7\frac{19}{12}$ $= 8\frac{7}{12}$	
22.	<p>Tony has 48 marbles. Alfred has twice as many as Tony. How many marbles do they have altogether?</p> <p>Answer: _____ marbles (2)</p>	<p>Altogether = <math>48 + (48 \times 2)</math></p> $= 48 + 96$ $= \mathbf{144 \text{ marbles}}$	
23.	<p>On a map 2cm represent 7km. On that same map, what distance will be represented by 8cm?</p> <p>Answer: _____ km (2)</p>	$2\text{cm} = 7\text{km}$ $1\text{cm} = \frac{7}{2}$ $8\text{cm} = \frac{7}{2} \times \frac{8}{1}$ $= \mathbf{28\text{km}}$	
24.	<p>Bob set out on a journey. He cycled <math>\frac{5}{12}</math> of the journey, jogged <math>\frac{1}{3}</math> and walked the rest. What fraction of the journey did he walk?</p> <p>Answer: _____ (2)</p>	<p>Walked = <math>1 - \{\frac{5}{12} + \frac{1}{3}\}</math></p> $= 1 - \{\frac{5+4}{12}\}$ $= 1 - \frac{9}{12}$ $= \frac{3}{12}$ $= \frac{1}{4}$	

25.	<p>A man takes 15 minutes to pack 8 crates of fruits. At this same rate, how many crates of fruits will he be able to pack in <math>1\frac{1}{2}</math> hours?</p> <p>Answer: _____(3)</p>	$15\text{mins} = \frac{1}{4}\text{ hr}$ $1\frac{1}{2}\text{ hrs.} = 6 - \frac{1}{4}\text{hrs}$ $8 \times 6$ $= \textbf{48 crates}$										
26.	<p>Write in the box below the sign, <math>&gt;</math> or <math>&lt;</math>, that CORRECTLY completes the number sentence.</p> <p><math>\frac{7}{8}</math> <span style="border: 1px solid black; display: inline-block; width: 40px; height: 30px; vertical-align: middle;"></span> <math>\frac{2}{3}</math></p> <p>Answer: _____ (2)</p>	$\frac{7}{8} = \frac{21}{24} \qquad \frac{2}{3} = \frac{16}{24}$ $\therefore \frac{7}{8} > \frac{2}{3}$										
27.	<p>Complete the table below:</p> <table><tr><th>Fraction</th><th>Decimal</th><th>Percentage</th></tr><tr><td><math>\frac{2}{5}</math></td><td>(a)_____</td><td>40%</td></tr><tr><td>(b)_____</td><td>0.625</td><td>(c )_____</td></tr></table> <p>Answer: _____(3)</p>	Fraction	Decimal	Percentage	$\frac{2}{5}$	(a)_____	40%	(b)_____	0.625	(c )_____	<p>(a) <b>0.4</b></p> <p>(b) <math>0.625 = \frac{625}{1000}</math></p> $= \frac{5}{8}$ <p>(c) <b>62.5% or <math>62\frac{1}{2}\%</math></b></p>	
Fraction	Decimal	Percentage										
$\frac{2}{5}$	(a)_____	40%										
(b)_____	0.625	(c )_____										

28.	<p>Study the number pattern below.</p> <p>1, 4, 9, 16, ____, 36, ____</p> <p>(a) Write in the two missing numbers.</p> <p>Answer: _____ (2)</p> <p>(b) What is the twelfth number in this number pattern?</p> <p>Answer: _____ (1)</p>	<p>(a) Squared Numbers  <math>5^2 = 25</math> <math>7^2 = 49</math></p> <p>(b) <math>12^2 = 12 \times 12</math>  <math>= 144</math></p>	
29.	<p>Share \$160 between Mary and Frank, giving Frank \$20 more. How much money would Mary receive?</p> <p>Answer: _____ (3)</p>	<p><math>\\$160 - \\$20 = \\$140</math>  <math>\\$140 \div 2 = \\$70</math>  <math>\therefore \text{Frank} = \\$70 + \\$20</math>  <math>= \\$90</math></p> <p><b>Mary = \$70</b></p>	
30.	<p>The mean of three numbers is 68. If the first two numbers are 55 and 84, what is the third number?</p> <p>Answer: _____ (2)</p>	<p>If Mean = 68, then Total = <math>68 \times 3</math>  Total = 204  <math>3^{\text{rd}} \text{ Number} = 204 - (55 + 84)</math>  <math>= 204 - 139</math>  <math>= 65</math></p>	
31.	<p>A basket contains 5 apples, 6 bananas and 9 oranges. What percentage of the fruits are bananas?</p> <p>Answer: _____ % (2)</p>	<p>Total Fruits = <math>5 + 6 + 9</math>  <math>= 20</math>  Bananas = <math>\frac{6}{20} \times \frac{100}{1}</math>  <math>= 30\%</math></p>	

32. The volume of the cuboid shown below is  $54\,000\text{cm}^3$ .



- (a) What is the area of its base labelled B?

Answer: \_\_\_\_\_  $\text{cm}^2$ . (1)

- (b) What is the height of the shape?

Answer: \_\_\_\_\_ cm. (1)

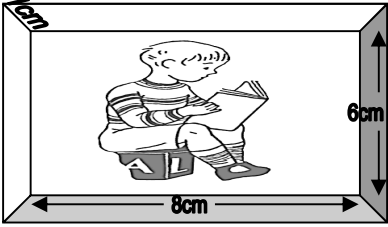
- (c) How many square faces does this cuboid have?

Answer: \_\_\_\_\_ (1)

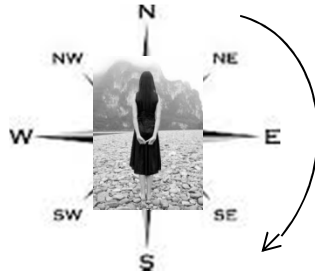
$$\begin{aligned} \text{(a) Area of base} &= L \times W \\ &= 60 \times 30 \\ &= \mathbf{1800\text{cm}^2} \end{aligned}$$

$$\begin{aligned} \text{(b) Height} &= \frac{\text{Volume}}{L \times W} \\ &= \frac{54\,000}{60 \times 30} \\ &= \mathbf{30\text{cm}} \end{aligned}$$

- (c) **2 square faces**

<p>33.</p>	<p>A picture measuring 8cm by 6cm is stuck onto a cardboard sheet, leaving a 1cm border all around as shown below.</p>  <p>(a) Calculate the area of the cardboard.</p> <p>Answer: _____ cm<sup>2</sup>. (2)</p> <p>(b) Calculate the area of the cardboard that is not covered by the picture.</p> <p>Answer: _____ cm<sup>2</sup>. (1)</p>	<p>(a) <math>L = 10\text{cm}</math>      <math>W = 8\text{cm}</math>  Area of card board = <math>L \times W</math>  <math>= 10 \times 8</math>  <math>= 80\text{cm}^2</math></p> <p>(b) Area of picture = <math>L \times W</math>  <math>= 8 \times 6</math>  <math>= 48\text{cm}^2</math></p> <p>Area of cardboard not covered =  <math>= 80\text{cm}^2 - 48\text{cm}^2</math>  <math>= 32\text{cm}^2</math></p>	
<p>34.</p>	<p>A labourer worked Monday to Friday from 8:00 am to 4:00 pm at \$23 per hour. Calculate the wage he received for the week.</p> <p>Answer: _____ (3)</p>	<p>1 day = 8 hours  5 days = <math>8 \times 5</math>  <math>= 40</math> hours  1 hr. = \$23  40 hrs. = <math>\\$23 \times 40</math>  <math>= \\$920</math></p>	
<p>35.</p>	<p>The entrance fee for a circus was \$18 for a child and double that price for an adult. How much would a party of 3 adults and 5 children have to pay in total to enter the circus?</p> <p>Answer: _____ (3)</p>	<p>Child = \$18    Adult = \$36 (<math>\\$18 \times 2</math>)  3 adults + 5 children  <math>= (3 \times \\$36) + (5 \times \\$18)</math>  <math>= \\$108 + \\$90</math>  <math>= \\$198</math></p>	

36. Shelly is facing north as shown in the diagram below.



- (a) If she turns in a clockwise direction and is now facing SE, through how many degrees did she turn?

Answer: \_\_\_\_\_ (1)

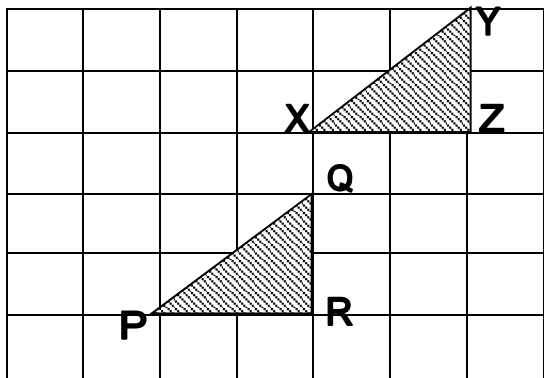
- (b) From this new position, she now makes a  $\frac{1}{2}$  turn in a clockwise direction. What will be her new position?

Answer: \_\_\_\_\_ (1)

$$\begin{aligned} \text{(a) } 8 \text{ spaces} &= 360^0 \\ 1 \text{ space} &= 360^0 \div 8 \\ 3 \text{ spaces} &= 3 \times (360^0 \div 8) \\ &= 3 \times 45^0 \\ &= 135^0 \end{aligned}$$

**(b) North West**

37. The triangle XYZ is moved to the position of triangle PQR.



(a) Name the movement.

Answer: \_\_\_\_\_ (1)

(b) Describe this movement FULLY.

Answer: \_\_\_\_\_

\_\_\_\_\_

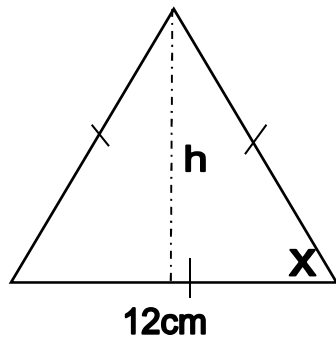
\_\_\_\_\_ (1)

(a) **Slide/Translation**

(b) **Slide 3 units down and 2 units left**

38.

The diagram below shows an equilateral triangle.



(a) Calculate the value of angle **x**.

Answer: \_\_\_\_\_<sup>0</sup>. (1)

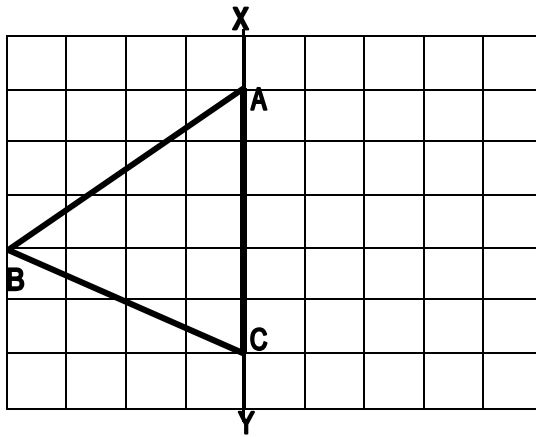
b) If the above triangle has an area of  $48\text{cm}^2$ , calculate the value of **h**.

Answer: \_\_\_\_\_ cm. (2)

$$\begin{aligned} \text{(a) } X^0 &= 180^0 \div 3 \\ X^0 &= \mathbf{60^0} \end{aligned}$$

$$\begin{aligned} \text{(b) Height} &= \text{Area} \div \text{Base} \\ &= 48\text{cm}^2 \div 12\text{cm} \\ &= \mathbf{4\text{cm}} \end{aligned}$$

39. XY is a line of symmetry of the incomplete figure ABCD shown below.



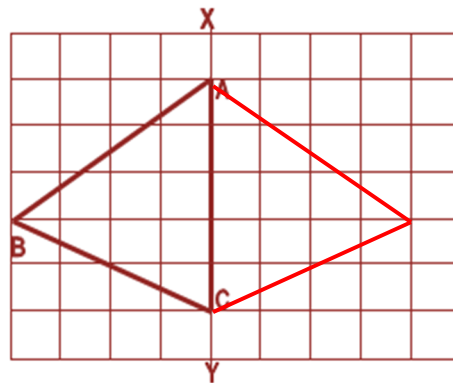
- (a) Complete the drawing of ABCD.  
(2)

- (b) Circle the term from the list below that BEST describes ABCD.

Parallelogram	Square
Quadrilateral	Rhombus

(1)

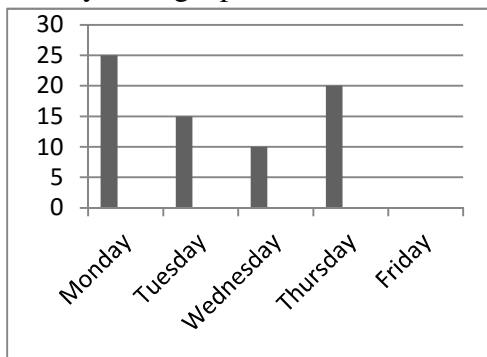
(a)



(b) Parallelogram

40.

The incomplete graph below shows the marks that John scored in Mathematics each day during a particular week.



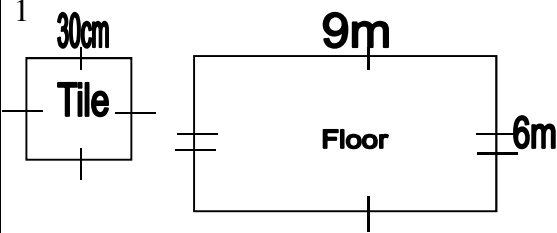
John scored a total of 80 marks for that week. Complete the bar graph to show how many marks he scored on Friday.

Answer: \_\_\_\_\_ (2)

$$\begin{aligned}
 \text{Friday} &= 80 - (25 + 15 + 10 + 20) \\
 &= 80 - 70 \\
 &= \mathbf{10 \text{ marks}}
 \end{aligned}$$

### SECTION 3

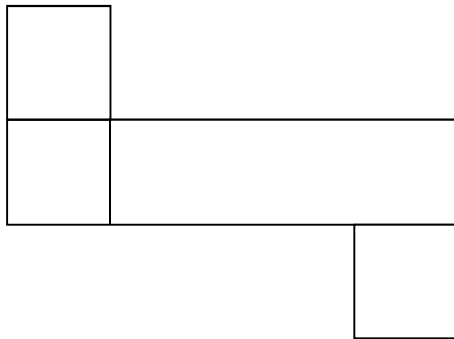
**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
41.	<p>1</p>  <p>Mr. James wants to tile his 9m by 6m floor using tiles as shown above.</p> <p>(a) Calculate the area of a tile.</p> <p>Answer: _____ cm<sup>2</sup>(1)</p> <p>(b) How many tiles are needed to cover the floor?</p> <p>Answer: _____(2)</p> <p>(c) If tiles are sold in boxes of 12 at \$15 per box, how much money would Mr. James have to spend on tiles?</p> <p>Answer: _____(2)</p>	<p>(a) Area of tile = S x S  = 30 x 30  = <b>900cm<sup>2</sup></b></p> <p>(b) Tiles needed = <math>\frac{900 \times 600}{30 \times 30}</math>  = <b>600 tiles</b></p> <p>(c) No. of boxes needed = <math>600 \div 12</math>  = 50</p> <p>Spend = 50 x \$15  = <b>\$750</b></p>	

42.	<p>A farmer harvested 1200 tomatoes from his garden. He sold <math>\frac{3}{8}</math> on Monday and <math>\frac{1}{3}</math> of the remainder on Tuesday.</p> <p>(a) How many tomatoes were sold on Monday?</p> <p>Answer: _____ (1)</p> <p>b) How many tomatoes were sold on Tuesday?</p> <p>Answer: _____ (1)</p> <p>(c) If the tomatoes he was left with were placed in bags of 10 and sold at \$16 per bag on Wednesday, how much money would he collect from Wednesday's sales?</p> <p>Answer: _____ (2)</p>	<p>(a) Sold = <math>\frac{3}{8} \times \frac{1200}{1}</math> = <b>450 tomatoes</b></p> <p>(b) Remainder = <math>1200 - 450</math> = 750 tomatoes Tuesday = <math>\frac{1}{3} \times \frac{750}{1}</math> = <b>250 tomatoes</b></p> <p>(c) Left with = <math>1200 - (450 + 250)</math> = <math>1200 - 700</math> = 500 Bags = <math>500 \div 10</math> = 50 bags  Wednesday's Sales = <math>50 \times \\$16</math> = <b>\$800</b></p>	
-----	---	--	--

43.	<p>Ms. Flora borrowed \$2400 at 10% simple interest for 2 years.</p> <p>(a) How much interest would she have to pay for the two years?</p> <p>Answer:\$_____ (1)</p> <p>b) How much money did she repay altogether?</p> <p>Answer:_____ (2)</p> <p>c) Ms. Flora repaid the total amount in equal monthly payments over a period of 1 year. How much money did she pay EACH month?</p> <p>Answer:_____ (2)</p>	<p>(a) <math>S.I = \frac{P \times R \times T}{100}</math>  <math>= \frac{2400 \times 10 \times 2}{100}</math>  <math>= \\$480</math></p> <p>(b) Amount = \$2400 + \$480  <math>= \\$2880</math></p> <p>(c) Monthly Payment = <math>\\$2880 \div 12</math>  <math>= \\$240</math></p>																									
44.	<p>Complete the table below:</p> <table border="1"> <thead> <tr> <th>Item</th><th>No.</th><th>Cost per Item</th><th>Cost</th></tr> </thead> <tbody> <tr> <td>Notebooks</td><td>4</td><td>\$3.99</td><td>_____</td></tr> <tr> <td>Markers</td><td>_____</td><td>\$2.50</td><td>\$17.50</td></tr> <tr> <td>Pens</td><td>3</td><td>_____</td><td>\$ 20.25</td></tr> <tr> <td colspan="3">Total Cost</td><td></td></tr> <tr> <td colspan="3">Change from \$100</td><td></td></tr> </tbody> </table> <p>(5)</p>	Item	No.	Cost per Item	Cost	Notebooks	4	\$3.99	_____	Markers	_____	\$2.50	\$17.50	Pens	3	_____	\$ 20.25	Total Cost				Change from \$100				<p>(a) <math>\\$3.99 \times 4 = \\$15.96</math></p> <p>(b) <math>\\$17.50 \div \\$2.50 = 7</math></p> <p>(c) <math>\\$20.25 \div 3 = \\$6.75</math></p> <p>(d) <math>\\$15.96 + \\$17.50 + \\$6.75</math>  <math>= \\$53.71</math></p> <p>(e) <math>\\$100 - \\$53.71</math>  <math>= \\$46.29</math></p>	
Item	No.	Cost per Item	Cost																								
Notebooks	4	\$3.99	_____																								
Markers	_____	\$2.50	\$17.50																								
Pens	3	_____	\$ 20.25																								
Total Cost																											
Change from \$100																											

45. Observe the figure below.



(a) Draw TWO lines on the figure above so that it forms the net of a solid.

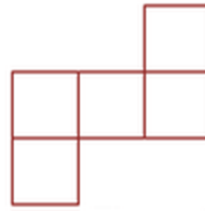
Answer:\_\_\_\_\_ (2)

(b) Name the solid formed when the net is folded.

Answer:\_\_\_\_\_ (1)

(c) The solid formed has \_\_\_\_\_ edges and \_\_\_\_\_ vertices. (2)

(a)



(b) **Cube**

(c) **12 edges 8 vertices**

46.	<p>The temperature for one week in February is shown on the table below.</p> <table><tr><th>Days</th><th>Temperature</th></tr><tr><td>Sunday</td><td>32<sup>0</sup></td></tr><tr><td>Monday</td><td>29.5<sup>0</sup></td></tr><tr><td>Tuesday</td><td>29.0<sup>0</sup></td></tr><tr><td>Wednesday</td><td>35.5<sup>0</sup></td></tr><tr><td>Thursday</td><td>29.5<sup>0</sup></td></tr><tr><td>Friday</td><td>28.0<sup>0</sup></td></tr><tr><td>Saturday</td><td>30<sup>0</sup></td></tr></table> <p>(a) Calculate the mean temperature for the week.</p> <p>Answer:_____ (2)</p> <p>(b) What is the difference between the highest and the lowest temperature recorded?</p> <p>Answer:_____ (2)</p> <p>(c) What was the modal temperature?</p> <p>Answer:_____ (1)</p>	Days	Temperature	Sunday	32 <sup>0</sup>	Monday	29.5 <sup>0</sup>	Tuesday	29.0 <sup>0</sup>	Wednesday	35.5 <sup>0</sup>	Thursday	29.5 <sup>0</sup>	Friday	28.0 <sup>0</sup>	Saturday	30 <sup>0</sup>	<p>(a) <math>\text{Mean} = 32^0 + 29.5^0 + 29.0^0 + 35.5^0 + 29.5^0 + 28^0 + 30^0</math> <math>= 213.5 \div 7</math> <math>= 30.5^0</math></p> <p>(b) <math>35.5^0 - 28^0 = 7.5^0</math></p> <p>(c) Modal Temperature = <b>29.5<sup>0</sup></b></p>	
Days	Temperature																		
Sunday	32 <sup>0</sup>																		
Monday	29.5 <sup>0</sup>																		
Tuesday	29.0 <sup>0</sup>																		
Wednesday	35.5 <sup>0</sup>																		
Thursday	29.5 <sup>0</sup>																		
Friday	28.0 <sup>0</sup>																		
Saturday	30 <sup>0</sup>																		
	<b>End of Test 11</b>																		

# TEST

# 12

# MATHEMATICS TEST 12

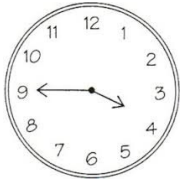

# TIME- 75 MINUTES

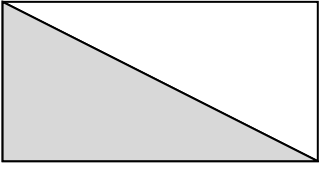
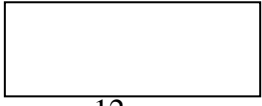
## SECTION 1

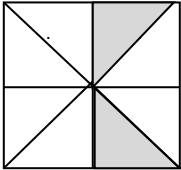
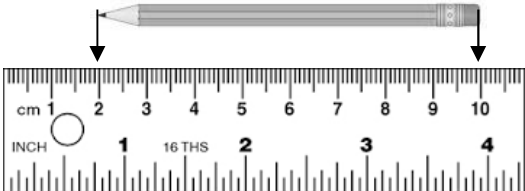
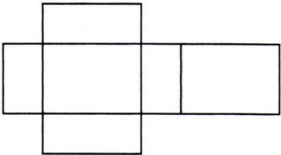
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Mark
1.	<p>Write in figures: Three hundred and eighteen thousand and seventy-two.</p> <p>Answer _____</p>	<b>318 , 072</b>	
2.	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>0.47, 0.39, 0.141, 0.80</b> </div> <p>Which of the decimal numbers above has the greatest value?</p> <p>Answer _____</p>	<b>0.80</b>	
3.	<p>In a test of forty problems, Ria got 36 correct. What percent did she get correct?</p> <p>Answer _____</p>	$\frac{36}{40} \times \frac{100}{1}$ $= \mathbf{90\%}$	
4.	<p>What % of 36 is 18?</p> <p>Answer _____</p>	$\frac{18}{36} \times \frac{100}{1}$ $= \mathbf{50\%}$	

5.	$48.16 = (4 \times 10) + (8 \times 1) + (1 \times \frac{1}{10}) + (6 \times \square)$  To complete the statement above, what fraction should be placed in the box?  Answer _____	$\frac{1}{100}$	
6.	What is the sum of 4.68, 2.4 and 3.19?  Answer _____	$\begin{array}{r} 4.68 + \\ 2.4 \\ 3.19 \\ \hline 10.27 \end{array}$	
7.	Subtract $2\frac{7}{12}$ from $4\frac{5}{6}$ .  Answer _____	$\begin{array}{r} 4\frac{5}{6} - 2\frac{7}{12} \\ = 2\frac{10}{12} - 2\frac{7}{12} \\ = 2\frac{3}{12} \\ = 2\frac{1}{4} \end{array}$	
8.	A school library has 1213 books. On Monday, 217 books which had been borrowed were returned and then 187 books were again borrowed.  How many books were there in the library at the end of the day?  Answer _____	$\begin{array}{l} \text{At end of day} = (1213 + 217) - 187 \\ = 1430 - 187 \\ = 1243 \end{array}$	
9.	$16^2 = 16 \times \square$  To complete the statement above, what number should be put in the box?  Answer _____	$16^2 = 16 \times 16$	

10.	 <p>Write in digital notation, the time shown in the clock above.</p> <p>Answer _____</p>	<p><b>3:45</b></p>	
11.	<p>Naton is 15cm taller than his sister who is 126cm tall.</p> <p>How tall is Naton?</p> <p>Answer _____</p>	<p><b>Naton = 126 + 15</b> <b>= 141cm</b></p>	
12.	 <p>A merchant bought the blouse shown for \$95.00 and sold it for \$145.00.</p> <p>How much profit did he make?</p> <p>Answer _____</p>	<p><b>Profit = S.P – C.P</b> <b>= \$145 - \$ 95</b> <b>= \$ 50</b></p>	

13.	 <p>10 cm</p> <p>6cm</p> <p>What is the area of the shaded part of the figure above?</p> <p>Answer _____ cm<sup>2</sup></p>	$\begin{aligned}\text{Area of triangle} &= \frac{B \times H}{2} \\ &= \frac{10 \times 6}{2} \\ &= 30\text{cm}^2\end{aligned}$	
14.	<p>Calculate <math>33\frac{1}{3}\%</math> of 240.</p> <p>Answer _____</p>	$\begin{aligned}33\frac{1}{3}\% &= \frac{1}{3} \\ \frac{1}{3} \times \frac{240}{1} \\ &= 80\end{aligned}$	
15.	 <p>12cm</p> <p>8cm</p> <p>Calculate the perimeter of the shape shown above.</p> <p>Answer _____ cm</p>	$\begin{aligned}\text{Perimeter of rectangle} &= 2L + 2W \\ &= (2 \times 12) + (2 \times 8) \\ &= 24 + 16 \\ &= 40\text{cm}\end{aligned}$	

16.	 <p>What fraction of the shape above is shaded?</p> <p>Answer _____</p>	<p>Shaded = <math>\frac{2}{8}</math>  <math>= \frac{1}{4}</math></p>	
17.	 <p>What is the length of the pencil above to the nearest whole centimeter?</p> <p>Answer _____ cm</p>	<p><b>8cm</b></p>	
18.	 <p>The net above is that of a _____</p>	<p><b>CUBOID</b></p>	

19.

The tally chart and frequency table below shows the favourite food of a number of children.

Type of food	Tally	Frequency
Chicken and Chips		12
Burger		7
Pizza		6

Complete the tally for Burger.

Answer

|||| 11

20.

The pictograph shows the number of ice-cream cones sold by four vendors during a particular week.

Vendors	No. of Ice-Cream Sold
A	▽▽▽▽
B	▽▽▽▽▽▽
C	▽▽▽
D	▽▽▽▽▽

▽ represents 20 ice-creams

How many more ice-creams did Vendor B sell than Vendor C?

Answer

▽ = 20

3 ▽ = 20 x 3

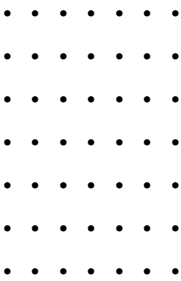
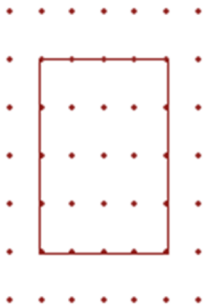
= 60 more ice-creams

## SECTION 2

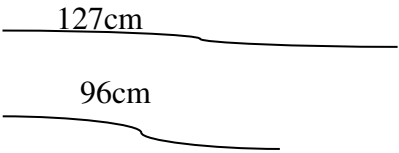
**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Mark
21.	<p>Calculate the sum of <math>5\frac{9}{10}</math> and <math>2\frac{1}{2}</math></p> <p>Answer _____ (3)</p>	$5\frac{9}{10} + 2\frac{1}{2}$ $7\frac{9}{10} + \frac{5}{10}$ $= 7\frac{14}{10}$ $= 8\frac{2}{5}$	
22.	<p>After two hours, a vendor sold <math>\frac{2}{5}</math> of the oranges he had taken to the market. He remained with 120 oranges.</p> <p>(a) How many oranges did the vendor take to the market?</p> <p>Answer _____ (2)</p> <p>(b) How many oranges did he sell after two hours?</p> <p>Answer _____ (1)</p>	<p>(a) Sold = <math>\frac{2}{5}</math>    <math>\therefore</math> Remained = <math>\frac{3}{5}</math></p> $\frac{3}{5} = 120$ $1 = \frac{120}{1} \times \frac{5}{3}$ $= \mathbf{200 \text{ oranges}}$ <p>(b) <math>\frac{2}{5} \times \frac{200}{1}</math></p> $= \mathbf{80 \text{ oranges}}$	
23.	<p>A bus had 45 passengers. When it stopped at the bus-stop 15 passengers came off and 12 entered the bus.</p> <p>How many passengers were there on the bus when it departed the bus stop?</p> <p>Answer _____ (2)</p>	$\text{Passengers} = (45 - 15) + 12$ $= \mathbf{42 \text{ passengers}}$	

24.	<p>How many heaps of guavas can a vendor make if he has 162 guavas and he places them in heaps of 9?</p> <p>Answer _____ heaps (2)</p>	$162 \div 9$ <b>= 18 heaps</b>	
25.	<div style="border: 1px solid black; padding: 5px; margin: 10px 0;">0.47, 0.59, 0.53, 0.36</div> <p>(a) Arrange the decimal numbers above in order of size, starting with the smallest.</p> <p>Answer _____ (1)</p> <p>(b) Which of the two numbers has a sum of 1?</p> <p>Answer _____ (2)</p>	<p>(a) <b>0.36, 0.47, 0.53, 0.59</b></p> <p>(b) <b><math>0.47 + 0.53 = 1</math></b></p>	
26.	<p>In a triathlon race, Karl ran 2km 500m, cycled 4km 200m and swam 700 metres.</p> <p>What is the total distance he covered?</p> <p>Answer _____ (2)</p>	$\begin{aligned} M &= 500 + 200 + 700 \\ &= 1400m \\ &= 1km\ 400m \\ KM &= 2 + 4 + 1 \\ &= 7km \end{aligned}$ <p><b>Total Distance = 7km 400m</b></p>	

27.	<p>In a class, <math>\frac{3}{5}</math> of the students are boys. If there are 14 girls,</p> <p>(a) How many students are there in the class?</p> <p>Answer _____ students (2)</p> <p>(b) How many boys are in the class?</p> <p>Answer _____ boys (1)</p>	<p>(a) If <math>\frac{3}{5}</math> are boys, then <math>\frac{2}{5}</math> are girls.</p> $\frac{2}{5} = 14$ $1 = \frac{14}{1} \times \frac{5}{2}$ $= 35 \text{ students}$ <p>(b) Boys = <math>\frac{3}{5} \times \frac{35}{1}</math></p> $= 21 \text{ boys}$	
28.	<p>A cricket match started at 10:30 am and ended 3 hours 15 minutes later.</p> <p>At what time did the game finish?</p> <p>Answer _____ (2)</p>	$\begin{array}{r} 10 : 30 \\ + 3 : 15 \\ \hline 13 : 45 \\ - 12 : 00 \\ \hline 1 : 45 \text{ pm} \end{array}$	
29.	 <p>The dots above are drawn 1cm apart. Connect the dots to create a rectangle with an area of <b>20cm<sup>2</sup></b>.</p> <p>(2)</p>		

30.	<p>Larry got up at 6:20 am. He took 35 minutes to get dressed for school and 10 minutes to have breakfast. By 7:20 am, Larry was at school. How long did it take for Larry to get to school?</p> <p>Answer _____ (3)</p>	<p>6: 20 + :35 = 6:55</p> <p>6:55 + :10 = 7:05</p> <p>School = 7:20</p> <p>Length of time = 7:20 – 7:05 = <b>15 minutes</b></p>																												
31.	<table><tr><td></td><td>m</td><td>cm</td></tr><tr><td></td><td>4</td><td>85</td></tr><tr><td>+</td><td>3</td><td>42</td></tr><tr><td></td><td colspan="2"><hr/></td></tr></table> <p>(2)</p>		m	cm		4	85	+	3	42		<hr/>		<table><tr><td></td><td>m</td><td>cm</td></tr><tr><td></td><td>4</td><td>85</td></tr><tr><td>+</td><td>3</td><td>42</td></tr><tr><td></td><td colspan="2"><hr/></td></tr><tr><td></td><td>8</td><td>27</td></tr></table>		m	cm		4	85	+	3	42		<hr/>			8	27	
	m	cm																												
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32.	<div><div><div>32cm</div><div>8cm</div><div>Rectangle</div></div><div><div>Square</div></div></div> <p>The rectangle and the square above have the same area.</p> <p>(a) What is the area of the rectangle?</p> <p>Answer _____cm<sup>2</sup> (1)</p> <p>(b) What is the length of one side of the square?</p> <p>Answer _____cm (2)</p>	<p>(a) Area of rect. = L x W = 32 x 8 = <b>256cm<sup>2</sup></b></p> <p>(b) Area of square = 256cm<sup>2</sup> Side of square = <math>\sqrt{256}</math> = <b>16 cm</b></p>																												

33.	<p>Ryan has 16 green marbles, 28 red marbles and 36 blue marbles. What percent of Ryan's marbles is green?</p> <p>Answer _____ (2)</p>	<p>Total marbles = <math>16 + 28 + 36</math>  <math>= 80</math>  Percentage green = <math>\frac{16}{80} \times \frac{100}{1}</math>  <math>= 20\%</math></p>	
34.	<p>  </p> <p>What is the total length of the two pieces of string above in metres?</p> <p>Answer _____ m (2)</p>	<p>Total length (cm) = <math>127 + 96</math>  <math>= 223\text{cm}</math>  CM <math>\rightarrow</math> M = <math>223 \div 100</math>  <math>= 2.23\text{m}</math></p>	
35.	<p>At 8:45 a.m, a teacher started distributing Maths papers. It took her 8 minutes to do so. The Maths paper was 75 minutes long.</p> <p>At what time did the test end?</p> <p>Answer _____ (2)</p>	<p> <math>8:45 +</math>  <math>\quad :08</math>  <hr/> <math>8:53 +</math>  <math>\quad 1:15</math>  <hr/> <math>9:68 -</math>  <math>+ 1:60</math>  <hr/> <b><u>10:08 am</u></b> </p>	
36.	<p>5 kg of sweets cost \$8.10. What is the cost of 15 kg of the sweets?</p> <p>Answer _____ (3)</p>	<p> <math>5\text{kg} = \\$8.10</math>  <math>1\text{kg} = \\$8.10 \div 5</math>  <math>15\text{kg} = (\\$8.10 \div 5) \times 15</math>  <math>= \\$ 1.62 \times 15</math>  <math>= \textbf{\\$24.30}</math> </p>	

37.	<p><b>36, ____ , 16 , 9 , 4 , ____</b></p> <p>The numbers above form a pattern. What are the two missing numbers?</p> <p>Answer _____ (2)</p>	<p><b>25, 1</b></p>	
38.	<p>(a) Divide <math>4\frac{2}{5}</math> by <math>\frac{11}{9}</math></p> <p>Answer _____ (2)</p> <p>(b) Add <math>\frac{2}{5}</math> to the answer in part (a)</p> <p>Answer _____ (1)</p>	<p>(a) <math>4\frac{2}{5} \div \frac{11}{9}</math>  <math>= \frac{22}{5} \div \frac{11}{9}</math>  <math>= \frac{22}{5} \times \frac{9}{11}</math>  <math>= 3\frac{3}{5}</math></p> <p>(b) <math>3\frac{3}{5} + \frac{2}{5}</math>  <math>= 4</math></p>	
39.	<p>Every sixth customer at a supermarket is given a discount.</p> <p>(a) How many customers received discounts if 77 customers entered the supermarket?</p> <p>Answer _____ (1)</p> <p>(b) How many more customers must enter the store for another discount to be given?</p> <p>Answer _____ (2)</p>	<p>(a) <math>77 \div 6 = 12</math> <b>customers received discounts</b></p> <p>(b) <math>77 - 72 = 5</math>  <math>6 - 5 = 1</math>  <b>1 more customer needed for the discount to be given</b></p>	

40.	<p>Mother shared \$300.00 between Tom and Ken giving Tom \$60.00 less than Ken.</p> <p>(a) How much money did each child get?</p> <p>Answer _____ (1)</p> <p>(b) Ken then spent 20% of his money on a book. How much money is he left with?</p> <p>Answer _____ (2)</p>	<p>(a) <math>\\$300 - \\$60 = \\$240</math></p> <p><math>\\$240 \div 2 = \\$120</math></p> <p>Ken = <math>\\$120 + \\$60</math></p> <p>= \$ 180</p> <p>Tom = \$120</p> <p><b>Ken = \$180    Tom = \$ 120</b></p> <p>(b) <math>20\% \times \\$180</math></p> <p>= <math>\frac{1}{5} \times \frac{180}{1}</math></p> <p>= \$36</p> <p>Left with = <math>\\$180 - \\$36</math></p> <p>= <b>\$144</b></p>	
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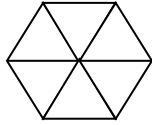
### SECTION 3

**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

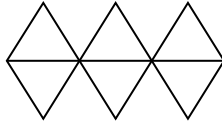
<p>41. A farmer has 360 animals on his farm. 30% of these animals are sheep and <math>\frac{3}{4}</math> of the remainder are chickens. The rest of the animals are goats.</p> <p>(a) How many sheep does the farmer have on his farm?</p> <p>Answer _____ sheep (1)</p> <p>(b) How many chickens does he have?</p> <p>Answer _____ chickens (2)</p> <p>(c) How many of his animals are goats?</p> <p>Answer _____ goats (2)</p>	<p>(a) <math>30\% \times 360</math>  <math>= 360 \times 0.3</math>  <math>= \mathbf{108 \text{ sheep}}</math></p> <p>(b) Remainder <math>= 360 - 108</math>  <math>= 252</math>  Chickens <math>= \frac{3}{4} \times \frac{252}{1}</math>  <math>= \mathbf{189 \text{ chickens}}</math></p> <p>(c) Goats <math>= 360 - (108 + 189)</math>  <math>= 360 - 297</math>  <math>= \mathbf{63 \text{ goats}}</math></p>	
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42.	<p>At a circus, 40% of the people who attended were women, 25% were men and there were 210 children.</p> <p>(a) What percent of the audience were children?</p> <p>Answer _____ (1)</p> <p>(b) How many persons attended the circus in ALL?</p> <p>Answer _____ (2)</p> <p>(c) How many more women than men were there at the circus?</p> <p>Answer _____ (2)</p>	<p>(a) Total = 100%</p> <p>Women + Men = 40% + 25%</p> <p style="text-align: center;">= 65%</p> <p>Children = 100% - 65%</p> <p style="text-align: center;">= 35%</p> <p>(b) 35% = 210</p> $\frac{7}{20} = 210$ $1 = \frac{210}{1} \times \frac{20}{7}$ <p style="text-align: center;"><b>= 600 persons attended circus</b></p> <p>(c) Women - Men = 40% - 25%</p> <p style="text-align: center;">= 15%</p> $\frac{15}{100} \times \frac{600}{1}$ <p style="text-align: center;"><b>= 90 more women</b></p>	
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43. Ronald and Ravi each used 6 equilateral triangular tiles to make two patterns as shown below. Each tile has a side 4 cm.



RONALD



RAVI

- (a) What is the name given to the shape formed by Ronald?

Answer \_\_\_\_\_ (1)

- (b) What is the perimeter of Ravi's shape?

Answer \_\_\_\_\_ cm (2)

- (c) By how much is the perimeter of Ravi's shape GREATER than Ronald's?

Answer \_\_\_\_\_ (2)

(a) **Hexagon**

(b) **Ravi = 12 x 4**

**= 48cm**

(c) **Ronald = 6 x 4**  
**= 24cm**

**Difference = 48 - 24**  
**= 24cm**

44.

Gary and Sheldon are involved in a dart throwing competition. Points are awarded based on the colours struck, as shown below.

Red ---- 20 points  
 Green ---- 15 points  
 Yellow ---- 10 points  
 Black ---- 5 points

Each player was given ten throws and the table below shows Gary's throws:

Colours	Times Struck
<b>Red</b>	<b>2</b>
<b>Green</b>	<b>1</b>
<b>Yellow</b>	<b>3</b>
<b>Black</b>	<b>4</b>

(a) How many points did Gary get?

Answer \_\_\_\_\_ points (2)

(b) After ten throws, Sheldon had the same number of points as Gary.  
 On the table below, complete Sheldon's scorecard.

Colour	Times Struck	Points
<b>Red</b>	<b>1</b>	<b>20</b>
<b>Green</b>	<b>3</b>	
<b>Yellow</b>		<b>20</b>
<b>Black</b>	<b>4</b>	

(3)

(a) Gary

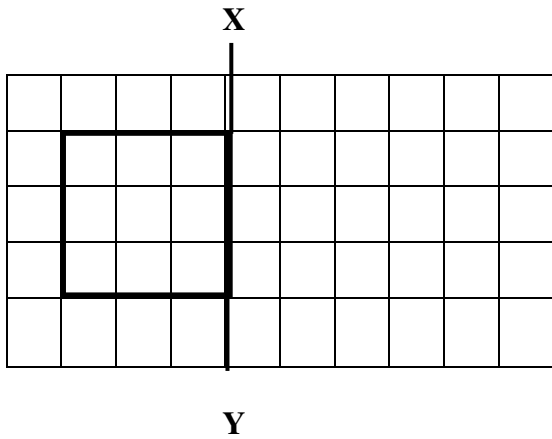
$$(2 \times 20) + (1 \times 15) + (3 \times 10) + (4 \times 5) \\ = 40 + 15 + 30 + 20 \\ = \mathbf{105 \text{ points}}$$

$$(b) \text{ Green} = 3 \times 15 \\ = \mathbf{45 \text{ points}}$$

$$\text{Yellow} = 20 \div 10 \\ = \mathbf{2 \text{ times}}$$

$$\text{Black} = 4 \times 5 \\ = \mathbf{20 \text{ points}}$$

45. On the grid below is a square.



The square is flipped along the line XY

- (a) On the grid, draw the flip of the shape.  
(2)
- (b) What is the name of the combined shape?

Answer \_\_\_\_\_ (1)

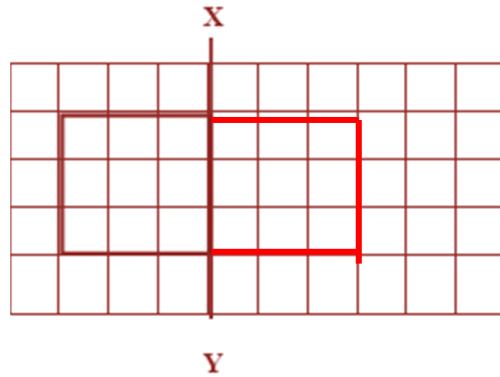
- (c) The line XY can be called

Answer \_\_\_\_\_ (1)

- (d) How many pairs of parallel sides does the combined shape have?

Answer \_\_\_\_\_ (1)

(a)

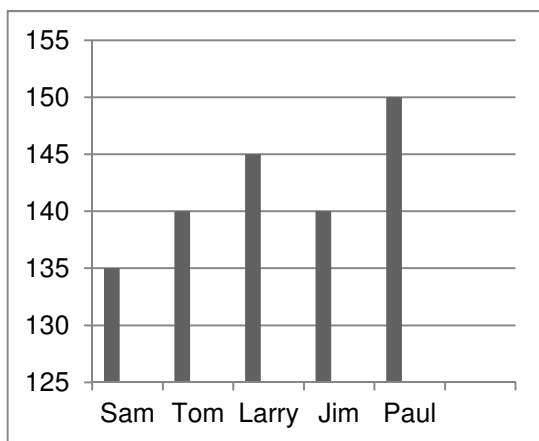


(b) **RECTANGLE**

(c) **Mirror Line**

(d) **2 pairs of parallel sides**

46. The graph below shows the heights of five red bean plants in a class.



- (a) What is the height of Larry's red bean plant?

Answer \_\_\_\_\_ mm (1)

- (b) Which two children have plants of the same heights?

Answer \_\_\_\_\_ (1)

- (c) What is the difference between the height of the tallest plant and the height of the shortest plant?

Answer \_\_\_\_\_ mm (1)

- (d) What is the mean height of the children's red bean plants?

Answer \_\_\_\_\_ mm (2)

(a) **145 mm**

(b) **Jim and Tom**

(c)  $150 - 135 = \mathbf{25mm}$

(d) **Total** =  $135 + 140 + 145 + 140 + 150$

$$\text{Mean} = \frac{710}{5}$$

$$= \mathbf{142mm}$$

**End of Test 12**

# TEST

# 13

# MATHEMATICS TEST 13

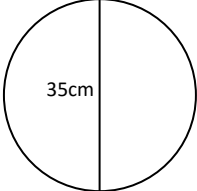
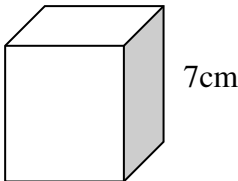
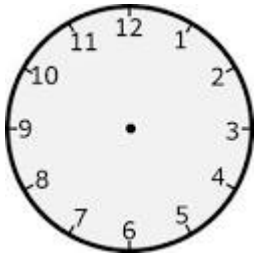

# TIME- 75 MINUTES


## SECTION 1

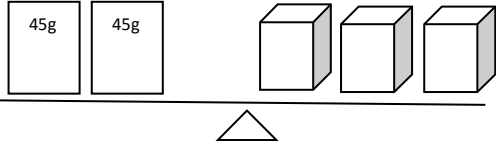
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Marks
1.	What is the numeral for eleven million, three hundred and twelve thousand and seventy-five.  Answer: _____	<b>11 312 075</b>	
2.	What is the value of the digit 6 in the number 303.64?  Answer: _____	<b><math>\frac{6}{10}</math></b>	
3.	Round off the numeral 23584 to the nearest hundred.  Answer: _____	<b>23 600</b>	
4.	Marc had \$85.00. He bought a toy for \$16.00 and saved \$32.00. He kept the rest of his money for school.  How much money did he have for school?  Answer: \$ _____	<b>School = \$85 – (\$16 + \$32) = \$85 - \$48 = \$37</b>	

5.	<p>Write &lt;, &gt; or = to correctly complete the statement below.</p> <p><math>\frac{1}{4}</math> <input type="text"/> 0.25</p> <p>Answer: _____</p>	$\frac{1}{4} = 0.25$	
6.	<p><math>1820 = (1 \times 1000) + (8 \times 100) + (2 \times 10) + (0 \times \text{<input type="text"/>})</math>.</p> <p>What number goes into the box?</p> <p>Answer: _____</p>	$\square = 1$	
7.	<p>Find the sum of 7234, 306 and 231.</p> <p>Answer: _____</p>	$7771$	
8.	<p>If Ryan earns \$104.00 in a day and works 8 hours a day, how much is he paid for ONE hour of work?</p> <p>Answer: _____</p>	$\begin{aligned} 8 \text{ hours} &= \$104 \\ 1 \text{ hour} &= \$104 \div 8 \\ &= \$13 \end{aligned}$	
9.	<p>A jug contains 250ml of water. How many litres of water will 9 such jugs contain if they are filled?</p> <p>Answer: _____ litres</p>	$\begin{aligned} 1 \text{ jug} &= 250\text{ml} \\ 9 \text{ jugs} &= 250 \times 9 \\ &= 2250 \text{ ml} \div 1000 \\ &= 2.25\text{L} \end{aligned}$	

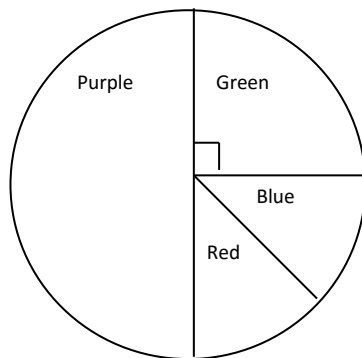
10.	 <p>Calculate the circumference of the circle.</p> <p>Answer: _____cm</p>	<p>Circumference = <math>D \times \pi</math>  <math>= 35 \times \frac{22}{7}</math>  <math>= 110 \text{ cm}</math></p>	
11.	 <p>Calculate the volume of the cube shown above.</p> <p>Answer: _____cm<sup>3</sup></p>	<p>Volume of cube = <math>S \times S \times S</math>  <math>= 7 \times 7 \times 7</math>  <math>= 343\text{cm}^3</math></p>	
12.	<div data-bbox="423 1171 583 1262" data-label="Text"> <div>6:30a.m</div> </div> <p>The digital clock above shows the time that Mr. Douglas leaves home. If he reaches to work 90 minutes later, draw the hands on the clock face below to show the time he reaches to work.</p> 		

13.	 1670g  The bananas shown above weigh 1670g.  Express this weight in kilograms.  Answer: _____ kg	$1670\text{g} \div 1000$  $= 1.67 \text{ kg}$	
14.	Name the solid that contains one circular edge and an apex.  Answer : _____	<b>cone</b>	
15.	How many 25 cent coins will Susan get if she changed \$9.00 into 25 cent pieces?  Answer: _____	$\$1 = 4 \text{ coins}$ $\$9 = 4 \times 9$ $= 36 - 25\text{c coins}$	
16.	Keron bought a new suit for \$300.00 and sold it to make a profit of \$60.00.  Calculate his profit percent.  Answer: _____ %	$\text{Profit}\% = \frac{\text{Profit}}{\text{C.P}} \times 100$ $= \frac{60}{300} \times \frac{100}{1}$  $= 20\%$	

17.	 <p>The scale above is balanced. If each bag on the left weighs 45g, calculate the weight of each box on the right if they are of equal weights.</p> <p>Answer: _____ g</p>	$  \begin{aligned}  45\text{g} \times 2 &= 90\text{g} \\  3 \text{ boxes} &= 90\text{g} \\  1 \text{ box} &= 90\text{g} \div 3 \\  &= \mathbf{30\text{g}}  \end{aligned}  $	
18.	<p>What unit of measurement should be used to measure the weight of a watermelon?</p> <p>Answer: _____</p>	$\mathbf{kg}$	
19.	<p>If the average of 8 numbers is 312, what is the total of the 8 numbers?</p> <p>Answer: _____</p>	$  \begin{aligned}  \text{Mean} &= 312 \\  \text{Total} &= \text{Mean} \times N(n) \\  &= 312 \times 8 \\  &= \mathbf{2496}  \end{aligned}  $	

20.

The pie chart shows the favourite colours of pupils in a Std 5 class.



If six pupils liked blue and six pupils liked red, how many pupils are in the class?

Answer: \_\_\_\_\_ pupils

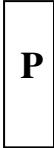
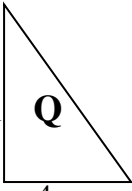
$$\begin{aligned}\frac{1}{4} &= 12 \\ 1 &= 12 \times 4 \\ &= 48 \text{ pupils}\end{aligned}$$

## SECTION 2

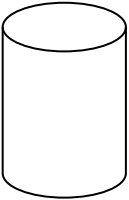
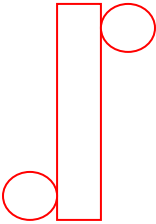
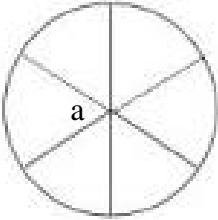
**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

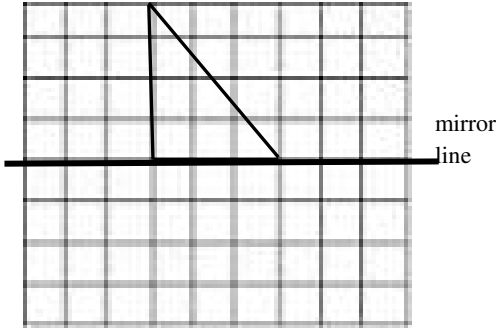
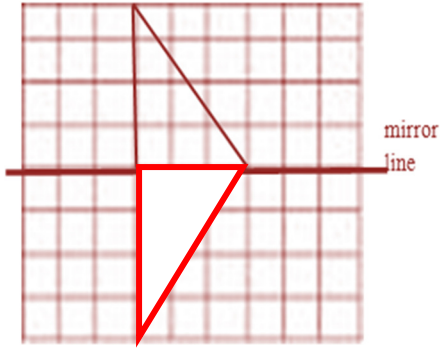
No.	Items	Working Column	Marks
21.	What is the difference between $3\frac{1}{2}$ and $2\frac{1}{3}$ ?  Answer: _____ (2)	$3\frac{1}{2} - 2\frac{1}{3}$ $1\frac{3}{6} - \frac{2}{6}$ $= 1\frac{1}{6}$	
22.	There are 60 apples in a bag. If 0.3 is sold and $\frac{1}{2}$ of the remainder is used to make pie, how many apples remain in the bag?  Answer _____ apples (3)	<p>Sold = <math>60 \times 0.3</math> = 18</p> <p>Pie = <math>\frac{1}{2} \times (60 - 18)</math> = <math>\frac{1}{2} \times \frac{42}{1}</math> = 21</p> <p>Bag = <b>21 apples</b></p>	
23.	Martha had \$420.00. If she spent 25% of it, how much was LEFT?  Answer: _____ (2)	<p>Spent = 25%   Left = 75%</p> <p>Left = <math>\frac{3}{4} \times \frac{420}{1}</math> = <b>315</b></p>	
24.	At a concert with 360 people, $\frac{2}{5}$ are men and the rest are women. How many women were at the concert?  Answer: _____ women (3)	<p>If <math>\frac{2}{5}</math> = men, then <math>\frac{3}{5}</math> = women</p> <p>Women = <math>\frac{3}{5} \times \frac{360}{1}</math>  = <b>216</b></p>	

25.	<p>On an estate containing 3478 sorrel trees, 1689 were harvested on Monday, 1216 on Tuesday, and the remainder was harvested over the weekend.</p> <p>How many were harvested over the weekend?</p> <p>Answer: _____ trees (3)</p>	$\begin{aligned}\text{Weekend} &= 3478 - (1689 + 1216) \\ &= 3478 - 2905 \\ &= \mathbf{573 \text{ trees}}\end{aligned}$	
26.	<p>In a cinema there were 235 rows of chairs. If each row had 25 chairs, how many chairs were there in all?</p> <p>Answer: _____ chairs (2)</p>	$235 \times 25 = \mathbf{5875 \text{ chairs}}$	
27.	<p>40% of the books in a library totals 280. How many books would make up 80% of the library?</p> <p>Answer: _____ books (2)</p>	$\begin{aligned}40\% &= \frac{2}{5} \\ \frac{2}{5} &= 280 \\ 1 &= \frac{280}{1} \times \frac{5}{2} \\ &= 700 \\ 80\% \times 700 &= 0.8 \times 700 \\ &= \mathbf{560 \text{ books}}\end{aligned}$	
28.	<p>Beth's dad gave her \$365.00 to share with her sister Lucy. How much money did Lucy get if Beth got \$20.00 MORE than her?</p> <p>Answer: \$ _____ (3)</p>	$\begin{aligned}\$365 - \$20 &= \$345 \\ \$345 \div 2 &= \$172.50 \\ \text{Beth} &= \$172.50 + \$20 \\ &= \$192.50 \\ \text{Lucy} &= \mathbf{\$172.50}\end{aligned}$	

29.	<p>Of the two shapes below, which has the greater area?</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>3cm</p>  <p><b>P</b> 9cm</p> </div> <div style="text-align: center;"> <p>8cm</p>  <p><b>Q</b></p> <p>4cm</p> </div> </div> <p>Answer: _____ (2)</p>	<p>Area of P = <math>L \times W</math>  <math>= 9 \times 3</math>  <math>= 27\text{cm}^2</math></p> <p>Area of Q = <math>\frac{B \times H}{2}</math>  <math>= \frac{8 \times 4}{2}</math>  <math>= 16\text{cm}^2</math></p> <p><b><math>\therefore</math> P has the greater area</b></p>	
30.	<p>A cashier works from Monday to Friday and earns \$15.00 per hour. If her hours of work are 7am to 3pm daily, what is her WEEKLY earnings?</p> <p>Answer: \$_____ (3)</p>	<p>1 hour = \$15  8 hours = <math>\\$15 \times 8</math>  <math>= \\$120</math>  1 day = \$120  5 days = <math>\\$120 \times 5</math>  <math>= \\$600</math></p>	
31.	<p>Dan bought a television for \$2795. If he gets a 20% discount, how much will the television cost?</p> <p>Answer: \$_____ (2)</p>	<p>Discount = 20%  Paid = 80% of \$2795  <math>= \frac{4}{5} \times \frac{2795}{1}</math>  <math>= \\$2236</math></p>	
32.	<p>A field has a radius of 14m. If an athlete runs around the field four times, what distance did he run?</p> <p>Answer: _____ (3)</p>	<p>Circumference = <math>D \times \pi</math>  <math>= 28 \times \frac{22}{7}</math>  <math>= 88\text{m}</math></p> <p>4 times <math>= 88 \times 4</math>  <math>= 352\text{m}</math></p>	

33.	<p>Ms. Ragoo borrowed \$25000.00 from a bank at a rate of 6% per annum for a period of 5 years.</p> <p>(a) How much interest would she have to pay at the end of the 5 years?</p> <p>Answer: \$_____ (2)</p> <p>(b) What is the total amount she would have to repay the bank?</p> <p>Answer: \$_____ (1)</p>	<p>(a) Simple Interest = <math>\frac{P \times R \times T}{100}</math>  <math>= \frac{25000 \times 6 \times 5}{100}</math>  <math>= \\$7500</math></p> <p>(b) Amount = P + S.I  <math>= \\$25\ 000 + \\$7\ 500</math>  <math>= \\$32\ 500</math></p>	
34.	<p>Brandon left school at 3:15pm and reached home 30 minutes before his favourite cartoon started at 6:30pm. How long did he take to get home?</p> <p>Answer: _____ (2)</p>	<p>Left school = 3 : 15  Home = 6 : 30 - :30  = 6 : 00pm</p> <p>Time taken = 6 : 00 – 3 : 15  = 2hrs 45 mins or <math>2\frac{3}{4}</math> hrs</p>	
35.	<p>A shopkeeper bought two dozen chocolates for \$60.00 and sold them at \$2.75 each. What was the profit percent?</p> <p>Answer: _____ (3)</p>	<p>C.P = \$60  S.P = \$ 2.75 x 24  = \$ 66  Profit = S.P – C.P  = \$66 - \$60  = \$6  Profit Percent = <math>\frac{6}{60} \times \frac{100}{1}</math>  = 10%</p>	

<p>36.</p>	<p>(a) Name the solid shown below.</p>  <p>Answer: _____ (1)</p> <p>(b) Draw the net of the solid in the space provided below.</p> <p>(1)</p>	<p><b>Cylinder</b></p> 	
<p>37.</p>	<p>The circle shown below is divided into six EQUAL parts.</p> <p>Calculate the size of angle a.</p>  <p>Answer: _____degrees (2)</p>	<p><b>Number of parts = 6</b></p> <p><b>6 parts = <math>360^\circ</math></b></p> <p><b>1 part = <math>360^\circ \div 6</math></b></p> <p><b><math>a^\circ = 60^\circ</math></b></p>	

<div>38.</div>	<div>(a) Flip the shape below along the mirror line.</div> <div></div> <div>(2)</div> <div>(b) Name the combined shape formed.</div> <div>Answer: _____ (1)</div>	<div>(a)</div> <div></div> <div>(b) Isosceles Triangle</div>						
<div>39.</div>	<div><table border="1"><tr><td>22</td><td>22</td><td>22</td><td>19</td><td>18</td><td>23</td></tr></table></div> <div>(a) What is the mean of the set of numbers above?</div> <div>Answer: _____ (1)</div> <div>(b) What is the mode of the set of numbers above?</div> <div>Answer: _____ (1)</div>	22	22	22	19	18	23	<div>(a) Mean = <math>\frac{22 + 22 + 22 + 19 + 18 + 23}{6}</math></div> <div><math>= \frac{126}{6}</math></div> <div><math>= 21</math></div> <div>(b) Mode = 22</div>
22	22	22	19	18	23			
<div>40.</div>	<div>James scored an average of 55 runs in 3 cricket matches. If he scored 35 runs in the next match, what was his new average?</div> <div>Answer _____ (3)</div>	<div>Average of 3 matches = 55</div> <div>Total = <math>55 \times 3</math></div> <div><math>= 165</math></div> <div>4<sup>th</sup> Match = <math>165 + 35</math></div> <div><math>= 200</math></div> <div>Average = <math>200 \div 4</math></div> <div><math>= 50 \text{ runs}</math></div>						

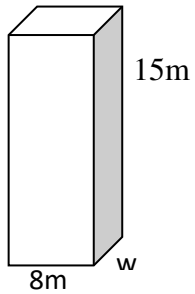
### SECTION 3

**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

<p><b>41.</b></p>	<p>At a farm, 25% of the animals were sheep, 0.45 were horses and the rest of the 120 animals were cows.</p> <p>(a) What percent of the animals on the farm were cows?</p> <p>Answer: _____ (1)</p> <p>(b) If 10 horses were sold, how many horses would REMAIN on the farm?</p> <p>Answer: _____ (2)</p> <p>(c) How many more cows than sheep were there on the farm?</p> <p>Answer: _____ (2)</p>	<p>(a) Cows = <math>100\% - (25\% + 45\%)</math>  <math>= 100\% - 70\%</math>  <math>= \mathbf{30\%}</math></p> <p>(b) <math>30\% = \frac{3}{10}</math>  <math>\frac{3}{10} = 120</math>  <math>1 = \frac{120}{1} \times \frac{10}{3}</math>  <math>= 400 \text{ animals}</math>  Horses = <math>\frac{45}{100} \times \frac{400}{1}</math>  <math>= 180 \text{ horses}</math>  Left with = <math>180 - 10</math>  <math>= \mathbf{170 \text{ horses}}</math></p> <p>(c) Cows = 30% Sheep = 25%  Difference = <math>30\% - 25\%</math>  <math>= 5\% \times 400</math>  <math>= \mathbf{20 \text{ more cows}}</math></p>	
<p><b>42.</b></p>	<p>Mr. Diaz bought 60 carrots. He used <math>\frac{1}{3}</math> to make carrot juice, gave away <math>\frac{1}{4}</math> of the remainder to his friend and sold the rest.</p> <p>(a) What fraction of the carrots was sold?</p> <p>Answer: _____ (3)</p> <p>(b) How many carrots did he give to his friend?</p> <p>Answer: _____ (2)</p>	<p>(a) Used + gave away = <math>\frac{1}{3} + (\frac{1}{4} \times \frac{2}{3})</math>  <math>= \frac{1}{3} + \frac{1}{6}</math>  <math>= \frac{1}{2}</math>  Left with = <math>1 - \frac{1}{2}</math>  <math>= \frac{1}{2}</math></p> <p>(b) Friend = <math>\frac{1}{6} \times \frac{60}{1}</math>  <math>= \mathbf{10 \text{ carrots}}</math></p>	

43.

The volume of the cuboid shown is  $480\text{m}^3$ . The length is  $8\text{m}$  and the height is  $15\text{m}$ .



(a) Calculate the width of the cuboid.

Answer: \_\_\_\_\_m (2)

(b) Find the AREA OF THE BASE of the cuboid.

Answer: \_\_\_\_\_ $\text{m}^2$  (3)

$$\begin{aligned} \text{(a) Width} &= \frac{\text{Volume}}{\text{L} \times \text{H}} \\ &= \frac{480\text{m}^3}{15 \times 8} \\ &= \frac{480\text{m}^3}{120\text{m}^2} \\ &= \mathbf{4\text{m}} \end{aligned}$$

$$\begin{aligned} \text{(b) Area of base of cuboid} &= \text{L} \times \text{W} \\ &= 8 \times 4 \\ &= \mathbf{32\text{m}^2} \end{aligned}$$

44.

The table shows dad's work schedule.

DAYS	HOURS WORKED	HOURLY RATE
Monday to Saturday	8am-4pm	\$15.00
Sundays and Public Holidays	9am to 1pm	Time and a half

(a) What is dad's weekly wage if he works one week from Monday to Sunday?

Answer: \$\_\_\_\_\_ (3)

(b) How much does dad earn if he works on Christmas Day and Boxing Day?

Answer: \$\_\_\_\_\_ (2)

(a) 1 hour = \$15

8 hours = \$15 x 8

1 day = \$120

6 days = \$120 x 6  
= \$720

Sunday = Time and a half ( $1\frac{1}{2}$ )

$= \frac{15}{1} \times \frac{3}{2}$

= \$22.50/hr

1 hour = \$22.50

4 hours = \$22.50 x 4  
= \$ 90

Total Weekly wage = \$720 + \$90  
= **\$810**

(b) Christmas Day and Boxing Day

= 4 + 4

= 8 overtime hours

1 hour overtime = \$ 22.50

8 hours overtime = \$ 22.50 x 8  
= **\$ 180**

45.

Cards are placed on a table to form a pattern as shown below.

0.5	0.8	1.2
1.7	—	—

(a) Complete the pattern above with the 2 missing numbers.

Answer: \_\_\_\_\_ and \_\_\_\_\_(2)

(b) What would be the eighth number in the pattern?

Answer: \_\_\_\_\_ (2)

(c) Which two cards in the pattern give a total of 2.0?

Answer: \_\_\_\_\_ and \_\_\_\_\_(1)

(a)  $1.7 + 0.6 = 2.3$













$2.3 + 0.7 = 3.0$


(b)  $3.8 + 0.9 = 4.7$

(c)  $0.8 + 1.2 = 2$

46.

The pictograph shows the flavours of ice-cream liked by pupils in a class.

Flavours	Number of pupils
Chocolate	  
Vanilla	    
Strawberry	  
Peanut	

 = 3 pupils

(a) Which ice-cream flavour is most liked?

Answer: \_\_\_\_\_ (1)

(b) How many more pupils liked vanilla than peanut?

Answer: \_\_\_\_\_pupils (2)

(c) What percentage of pupils liked chocolate ice-cream?

Answer: \_\_\_\_\_ (2)

(a) **Vanilla**

(b) 4  = 4 x 3

**= 12 more pupils**

(c) Total = 12 x 3  
= 36 pupils

Chocolate =  $\frac{9}{36} \times \frac{100}{1}$

**= 25%**

**END OF TEST 13**

# TEST

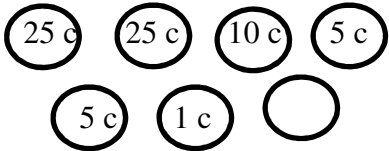
# 14

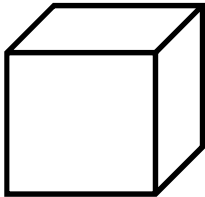
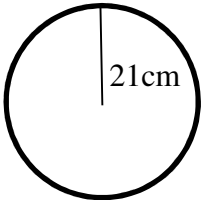
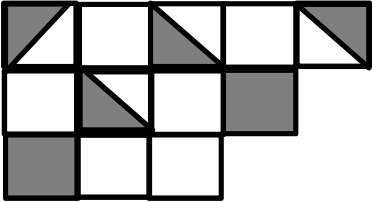
# MATHEMATICS TEST 14



# TIME- 75 MINUTES

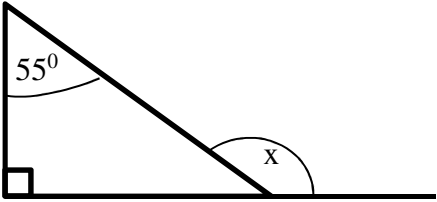
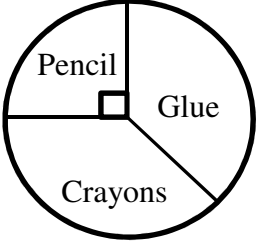
## SECTION 1

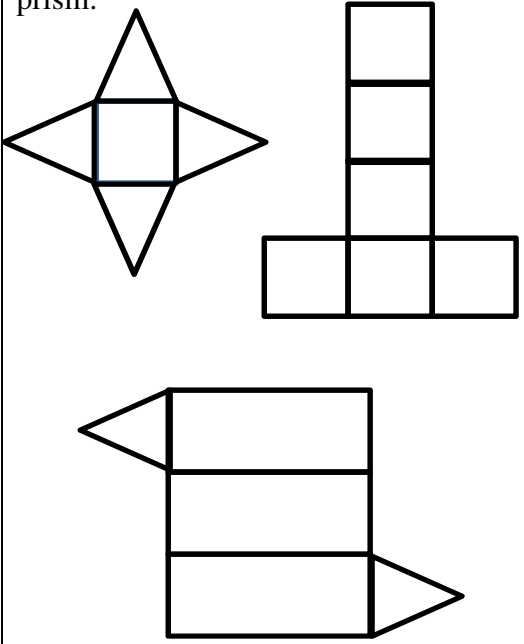
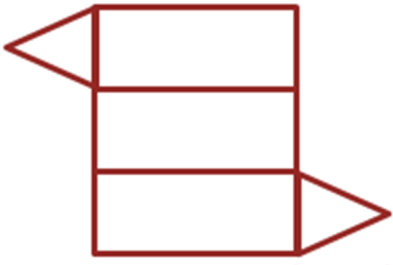
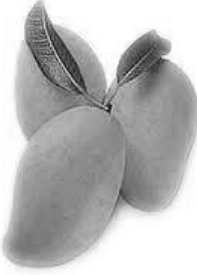
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Marks
1.	<p>Samuel bought a new car for five hundred and twenty seven thousand, three hundred and eighty two dollars. Express this amount in figures.</p> <p>Answer: \$_____</p>	<b>\$527382</b>	
2.	<p>Write <math>\frac{58}{100}</math> as a decimal.</p> <p>Answer:_____</p>	<b>0.58</b>	
3.	<p>Write the numeral which represents <math>(8 \times 100\,000) + (6 \times 1000) + (3 \times 100) + (6 \times 10) + (0 \times 1) =</math></p> <p>Answer:_____</p>	<b>806 360</b>	
4.	<p>Approximate \$87 645.00 to nearest thousand dollars.</p> <p>Answer: \$_____</p>	<b>\$88 000</b>	
5.	<p>The coins below total to a value of 76 cents. What is the value of the unmarked coin?</p> <div style="text-align: center;">  </div> <p>Answer:_____cents</p>	<p><b><math>25 + 25 + 10 + 5 + 5 + 1 = 71c</math></b>  <b><math>76c - 71c = 5c</math></b></p>	249

6.	<p>How many edges does the 3 dimensional figure below have?</p>  <p>Answer: _____ edges</p>	<p><b>12 edges</b></p>	
7.	<p>If the radius of a circle is 21cm, what is the circumference?</p>  <p>Answer: _____ cm</p>	<p>Radius = 21cm Diameter = 42cm</p> <p>Circumference = <math>D \times \pi</math>  <math>= \frac{42}{1} \times \frac{22}{7}</math>  <b>= 132cm</b></p>	
8.	<p>The East Side cricket team won 15 games, drew 3 and lost 2 games. What percent of the games did the team win?</p> <p>Answer: _____</p>	<p>Total games = <math>15 + 3 + 2</math>  <math>= 20</math> games  Win = <math>\frac{15}{20} \times \frac{100}{1}</math>  <b>= 75%</b></p>	
9.	<p>What fraction of the figure below is <b>NOT</b> shaded?</p>  <p>Answer: _____</p>	<p>Total = 12 Shaded = 4 Not Shaded = <math>12 - 4</math>  <math>= 8</math>  <math>\frac{8}{12} = \frac{2}{3}</math></p>	

10.	<p>What is the length of the pencil below?</p>  <p>Answer: _____ cm</p>	<p><b>10 cm</b></p>	
11.	<p>How many millilitres of milk can fill the 4 litre bottle below?</p>  <p>Answer: _____ ml</p>	<p><b>4 L = 4000 ml</b></p>	
12.	<p>Henry walks 539 metres to get to the grocery store. Nicholas walks 0.932 kilometres. Who walks the longer distance to get to the grocery store?</p> <p>Answer: _____</p>	<p><b>0.932 km = 932 m</b></p> <p><b>932m &gt; 539m</b>  <b>∴ Nicholas walked the longer distance</b></p>	
13.	<p>How many oranges did Mr. Lal sell, if he sold 15 bags, with each bag containing 250 oranges?</p> <p>Answer: _____ oranges</p>	<p><b>15 x 250 = 3750 oranges</b></p>	

14.	<p>What is the value of the angle labelled x?</p>  <p>Answer: _____</p>	$180^{\circ} - (90^{\circ} + 55^{\circ})$ $= 180^{\circ} - 145^{\circ}$ $= 35^{\circ}$ $x^{\circ} = 180^{\circ} - 35^{\circ}$ $= 145^{\circ}$	
15.	 <p>The pie chart above shows the items in a container. The total mass of the items in the container is 24kg.</p> <p>Calculate the mass of the pencils in the container?</p> <p>Answer: _____ kg</p>	$\text{Pencils} = \frac{1}{4} \times \frac{24}{1}$ $= 6 \text{ kg}$	
16.	<p>The long hand on a clock is pointing to 7. It makes a <math>90^{\circ}</math> turn CLOCKWISE. To what number will the long hand now be pointing?</p> <p>Answer: _____</p>	$90^{\circ} = 3 \text{ spaces}$ $7 + 3 = 10$	

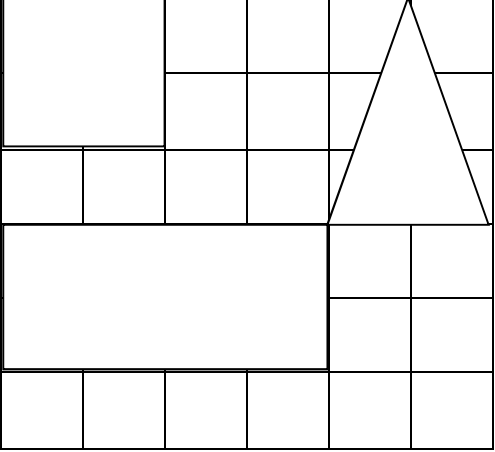
17.	<p>Circle the net that forms a triangular prism.</p>  <p>Answer: _____</p>		
18.	<p>Mangoes are sold at \$5.25 per kg</p>  <p>How much did Sayad pay if he bought 8 kg of mangoes?</p> <p>Answer: \$ _____</p>	$  \begin{aligned}  1\text{kg} &= \$5.25 \\  8\text{kg} &= \$5.25 \times 8 \\  &= \mathbf{\$42}  \end{aligned}  $	

19.	<div data-bbox="300 231 761 667" data-label="Image"> </div> <p data-bbox="272 793 805 911">The object labelled X moves in a straight line 2 units to the right. Draw its new position on the grid.</p>	<div data-bbox="839 258 1229 617" data-label="Image"> </div>	
20.	<p data-bbox="272 1388 732 1461">The following are the scores from 5 batsmen on a cricket team.</p> <p data-bbox="337 1514 667 1545">23   45   38   45   26</p> <p data-bbox="272 1598 597 1629">What is the modal score?</p> <p data-bbox="272 1682 797 1713">Answer:_____</p>	<p data-bbox="1052 1451 1089 1482">45</p>	


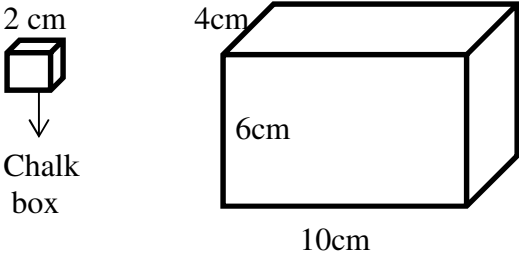
## SECTION 2

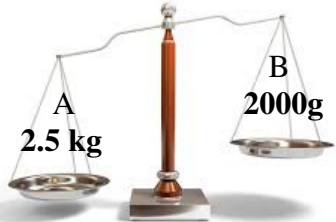
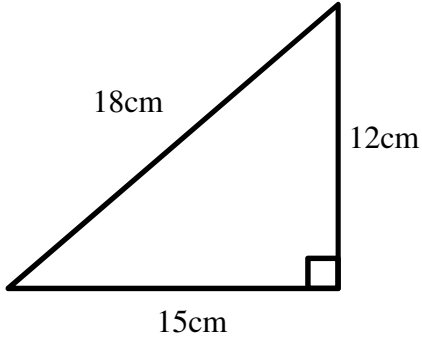
**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**


No.	Items	Working Column	Marks
21.	<p>What is the product of <math>6\frac{3}{4}</math> and <math>3\frac{2}{3}</math> ?</p> <p>Answer:_____ (2)</p>	$6\frac{3}{4} \times 3\frac{2}{3}$ $= \frac{27}{4} \times \frac{11}{3}$ $= \frac{99}{4}$ $= 24\frac{3}{4}$	
22.	<p>It takes 5.4 metres of cloth to make one dress and 2.6 metres of cloth to make a jacket.</p> <p>How many metres of cloth are needed to make 4 dresses and 2 jackets?</p> <p>Answer:_____m (3)</p>	$1 \text{ dress} = 5.4\text{m}$ $4 \text{ dresses} = 5.4 \times 4$ $= 21.6\text{m}$ $1 \text{ jacket} = 2.6\text{m}$ $2 \text{ jackets} = 2.6 \times 2$ $= 5.2\text{m}$ $4 \text{ dresses} + 2 \text{ jackets} = 21.6 + 5.2$ $= 26.8\text{m}$	
23.	<p>There are 756 lettuce plants in a garden. If each row has 42 lettuce plants, how many rows of lettuce plants are there?</p> <p>Answer:_____ (2)</p>	$756 \div 42$ $= 18 \text{ rows}$	
24.	<p>A Standard 5 class has 30 students. There are 6 more boys than girls. What percentage of the class is boys?</p> <p>Answer:_____ (3)</p>	$30 - 6 = 24$ $24 \div 2 = 12$ $\text{Girls} = 12$ $\text{Boys} = 12 + 6$ $= 18$ $\text{Percentage} = \frac{18}{30} \times \frac{100}{1}$ $= 60\%$	
		255	


25.	<p>It takes 75 minutes for pupils in a class to complete a Mathematics practice test. Tests are given on Monday, Wednesday and Friday.</p> <p>How long, in HOURS, does the class spend on practice tests in a week?</p> <p>Answer:_____ hours (2)</p>	$75 \times 3 = 225 \text{ minutes}$ $225 \div 60$ $= 3\frac{3}{4} \text{ hrs}$	
26.	 <p>Each block measures 1cm by 1cm.</p> <p>a) Which of the shapes above has the GREATEST area?</p> <p>Answer:_____ (1)</p> <p>b) What is the area of the triangle?</p> <p>Answer:_____ units<sup>2</sup> (2)</p>	<p>(a) Area of square = <math>2 \times 2</math> = <math>4\text{cm}^2</math></p> <p>Area of triangle = <math>\frac{B \times H}{2}</math> = <math>\frac{2 \times 3}{2}</math> = <math>3\text{cm}^2</math></p> <p>Area of rectangle = <math>4 \times 2</math> = <math>8\text{cm}^2</math></p> <p><b><math>\therefore</math> Rectangle has the greatest area</b></p> <p>(b) Area of triangle = <b><math>3\text{cm}^2</math></b></p>	


27.	<p>Calculate <math>5^2 + 8^2 =</math></p> <p>Answer: _____ (2)</p>	$5^2 + 8^2 = 25 + 64$ $= 89$	
28.	<p>A spoon is <math>\frac{1}{3}</math> the weight of a plate. If the plate weighs 360g, how much would 15 spoons weigh?</p> <p>Give your answer in kilograms.</p> <p>Answer: _____ kg (3)</p>	$1 \text{ spoon} = \frac{1}{3} \times \frac{360}{1}$ $= 120\text{g}$ $15 \text{ spoons} = 120\text{g} \times 15$ $= 1800\text{g} \div 1000$ $= \mathbf{1.8\text{kg}}$	
29.	<p>A book has 360 pages. Peter takes 15 minutes to read 5 pages. How many HOURS will it take him to finish reading the book if he reads it continuously?</p> <p>Answer: _____ hours (3)</p>	$5 \text{ pages} = 15 \text{ minutes}$ $1 \text{ page} = 15 \div 5$ $= 3 \text{ minutes}$ $360 \text{ pages} = 360 \times 3$ $= 1080 \text{ minutes}$ $= 1080 \div 60$ $= \mathbf{18 \text{ hours}}$	

30.	 <p>The mat above is a semi-circle with a diameter of 1.4 metres. It fits EXACTLY on the outside of a rectangular corridor of length 8 metres.</p> <p>What is the perimeter of the combined shape formed?</p> <p>Answer: _____m (3)</p>	$\begin{aligned}\text{Circumference} &= D \times \pi \\ &= \frac{1.4}{1} \times \frac{22}{7} \\ &= 4.4\text{m} \\ \text{Semi-Circle} &= \frac{1}{2} \times \frac{4.4}{1} \\ &= 2.2\text{m}\end{aligned}$ <p>Perimeter of combined shape  <math>= 8 + 8 + 1.4 + 2.2</math>  <math>= \mathbf{19.6\text{m}}</math></p>	
31.	 <p>2 cm ↓ Chalk box</p> <p>4cm 6cm 10cm</p> <p>Calculate how many of the cube shaped chalk boxes will be able to fill the larger box.</p> <p>Answer: _____(3)</p>	$\begin{aligned}\text{Number of boxes} &= \frac{10 \times 4 \times 6}{2 \times 2 \times 2} \\ &= \mathbf{30 \text{ chalk boxes}}\end{aligned}$	
32.	<p>Daren spent <math>\frac{3}{10}</math> of his allowance on a new shoe and <math>\frac{1}{5}</math> on some school supplies. What fraction of his money is left?</p> <p>Answer: _____(2)</p>	$\begin{aligned}\text{Fraction left} &= 1 - \left(\frac{1}{5} + \frac{3}{10}\right) \\ &= 1 - \frac{5}{10} \\ &= \frac{5}{10} \\ &= \mathbf{\frac{1}{2} \text{ of his money is left}}\end{aligned}$	

33.	<p>Hema ran 5 laps around a circular track and covered a distance of 880m. What is the diameter of the track?</p> <p>Answer:_____m (3)</p>	$880 \div 5 = 176\text{m}$ Circumference = 176m Diameter= $C \div \pi$ $= 176 \div \frac{22}{7}$ $= 176 \times \frac{7}{22}$ <b>= 56m</b>	
34.	 <p>How many grams must be added to B to make the scale balance?</p> <p>Answer:_____g (2)</p>	$2.5\text{kg} = 2500\text{g}$ $2500\text{g} - 2000\text{g} = \mathbf{500\text{g}}$	
35.	 <p>a) What is the perimeter of the shape above?</p> <p>Answer:_____ cm (1)</p> <p>b) What is the type of triangle shown above?</p> <p>Answer:_____ (1)</p>	(a) Perimeter of Triangle = $15 + 12 + 18$ <b>= 45cm</b> (b) Right Angled Triangle	

36.	 <p>A computer is marked at \$3400. There is an additional 15% VAT.</p> <p>a) How much VAT is to be paid on the computer?</p> <p>Answer: _____ (1)</p> <p>b) What would be the total cost for 2 such computers?</p> <p>Answer: _____ (2)</p>	<p>(a) <math>\text{VAT} = 15\% \times 3400</math>  <math>= \\$510</math></p> <p>(b) <math>2 \text{ computers} = 2 \times (3400 + 510)</math>  <math>= 2 \times \\$3910</math>  <math>= \\$7820</math></p>	
37.	<p>A bucket which holds 6 litres (<math>6000\text{cm}^3</math>) of water when emptied into a fish tank, fills it. The fish tank has a length of 30cm and a width of 20 cm.</p> <p>What is the height of the tank?</p> <p>Answer: _____ (3)</p>	<p><math>H = \frac{\text{Volume}}{L \times W}</math></p> <p><math>= \frac{6000}{30 \times 20}</math></p> <p><math>= 10\text{cm}</math></p>	

<p>38.</p>	<p>The minute hand on the clock below moved from the number 2 to the number 8 in a clockwise direction.</p> <p>Through how many degrees did the minute hand move?</p>  <p>Answer: _____(2)</p>	$  \begin{aligned}  2 \rightarrow 8 &= 6 \text{ spaces} \\  1 \text{ space} &= 30^\circ \\  &= 30^\circ \times 6 \\  &= \mathbf{180^\circ}  \end{aligned}  $	
<p>39.</p>	<p>A car was bought for \$30,000 and was sold for a profit of 25%. How much was the car sold for?</p> <p>Answer: _____(2)</p>	$  \begin{aligned}  S. P &= 100\% + 25\% \\  &= 125\% \\  &= 125\% \times 30\,000 \\  &= 1.25 \times 30\,000 \\  &= \mathbf{\$37\,500}  \end{aligned}  $	

40.	<p>The water tank below is <math>\frac{2}{7}</math> filled.</p>  <p>If the tank has 280 litres at present, how many litres of water will it hold when it is completely filled?</p> <p>Answer: _____ litres (2)</p>	$\frac{2}{7} = 280\text{L}$ $1 = 280 \times \frac{7}{2}$ $= \mathbf{980\text{ L}}$	
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### SECTION 3

**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

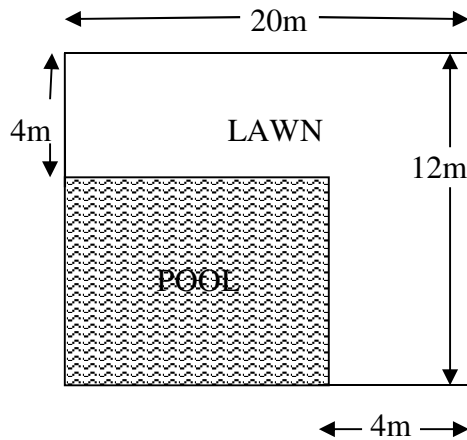
No.	Items	Working Column	Marks
41.	<p>At Strive Primary School, 15% of the 600 persons present at its Christmas Concert were children.</p> <p>Adults were charged \$12.00 admission while children were charged half price.</p> <p>(a) How many adults attended the concert? Answer: _____ (1)</p> <p>(b) If every fifth child entering was given a windmill, how many windmills were given away at the concert? Answer: _____ (2)</p> <p>(c) How much money was paid in total by adults and children? Answer: _____ (2)</p>	<p>(a) If 15% = children, then Adults = 85% x 600 = <b>510 adults</b></p> <p>(b) <math>600 - 510 = 90</math> children <math>90 \div 5 = \mathbf{18}</math> windmills</p> <p>(c) Adults = <math>510 \times \\$12</math> = \$6120</p> <p>Children = <math>90 \times \\$6</math> = \$ 540</p> <p>Total paid = <math>\\$6120 + \\$540</math> = <b>\$ 6660</b></p>	

42.	<p>The first leg of a relay race was run in 43.7 seconds, the second leg in 42.8 seconds, the third leg in 44.9 seconds and the last leg in 42.6 seconds.</p> <p>(a) Which leg of the race was run in the fastest time?</p> <p>Answer: _____ (1)</p> <p>(b) Which leg of the race was run in the slowest time?</p> <p>Answer: _____ (2)</p> <p>(c) How much faster was the second leg than the first leg?</p> <p>Answer: _____ (1)</p> <p>(d) How long was the ENTIRE relay race?</p> <p>Answer: _____ (2)</p>	<p>(a) Last Leg fastest (Least Time)</p> <p>(b) Third Leg (Longest Time)</p> <p>(c) <math>43.7 - 42.8 = \mathbf{0.9 \text{ seconds faster}}</math></p> <p>(d) Entire Relay  <math>= 43.7 + 42.8 + 44.9 + 42.6</math>  <math>= \mathbf{174 \text{ seconds or}}</math>  <math>\mathbf{2 \text{ minutes } 54 \text{ seconds}}</math></p>	
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43.	<p>Melissa's bedroom is 6m long and 4m wide. It is to be covered with square tiles of side 20cm.</p> <p>(a) How many tiles are needed?</p> <p>Answer: _____ (2)</p> <p>(b) If each tile costs \$7.50, what is the cost to tile the bedroom?</p> <p>Answer: _____ (2)</p> <p>(c) If Melissa was given a 10% discount, how much does she pay?</p> <p>Answer: _____ (1)</p>	<p>(a) Tiles needed = <math>\frac{600 \times 400}{20 \times 20}</math> = <b>600 tiles</b></p> <p>(b) 1 tile = \$7.50 600 tiles = <math>7.50 \times 600</math> = <b>\$4500</b></p> <p>(c) Discount = 10% Paid = <math>90\% \times \\$4500</math> = <b>\$4050</b></p>	
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44.

The diagram below shows a pool and lawn area of Elijah's yard.



(a) Calculate the area of the yard.

Answer: \_\_\_\_\_ m<sup>2</sup> (1)

(b) What is the area of the pool?

Answer: \_\_\_\_\_ m<sup>2</sup> (1)

(c) What is the area of the lawn?

Answer: \_\_\_\_\_ m<sup>2</sup> (1)

(d) If the pool was 5m deep, calculate the volume of the pool when full.

Answer: \_\_\_\_\_ m<sup>3</sup> (2)

$$\begin{aligned} \text{(a) Area of yard} &= L \times W \\ &= 20 \times 12 \\ &= 240\text{m}^2 \end{aligned}$$

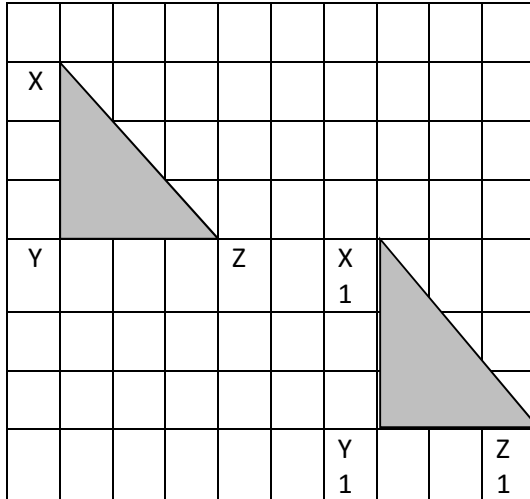
$$\begin{aligned} \text{(b) Area of pool} &= 16 \times 8 \\ &= 128\text{m}^2 \end{aligned}$$

$$\begin{aligned} \text{(c) Area of lawn} &= 240\text{m}^2 - 128\text{m}^2 \\ &= 112\text{m}^2 \end{aligned}$$

$$\begin{aligned} \text{(d) Volume of pool} &= L \times W \times H \\ &= 16 \times 8 \times 5 \\ &= 640\text{m}^3 \end{aligned}$$

45.

The triangle XYZ has moved to a new position at X1, Y1, Z1.



(a) Name the type of movement shown.

Answer: \_\_\_\_\_(1)

(b) Describe the movement FULLY.

Answer: \_\_\_\_\_(2)

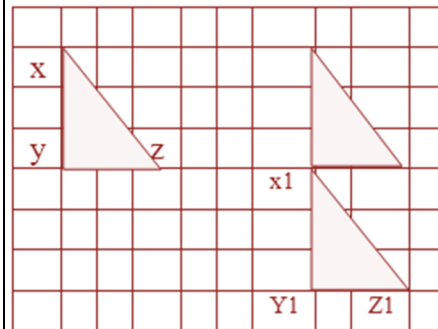
(c) Draw the new position of triangle X1, Y1, Z1 if it moves THREE units upward.

(2)

(a) Slide or Translation

(b) Slide 6 units right and 3 units down

(c)



46.	<p>The MEAN score of six basketball players is 35. Three of the scores are 45, 40 and 50.</p> <p>a) What is the total of the six scores?</p> <p>Answer: _____(1)</p> <p>b) The other three scores are the same. Calculate the value of each score.</p> <p>Answer: _____(2)</p> <p>c) A seventh player's score is added, making the new mean 36. What was the seventh player's score?</p> <p>Answer _____(2)</p>	<p>(a) <math>\text{Total} = 35 \times 6</math>  <math>= 210</math></p> <p>(b) <math>210 - (45 + 40 + 50)</math>  <math>210 - 135</math>  <math>= 75 \div 3</math>  <math>= 25</math></p> <p>(c) <math>36 \times 7 = 252</math>  Last score <math>= 252 - 210</math>  <math>= 42</math></p>	
	<b>END OF TEST 14</b>		

# TEST 15

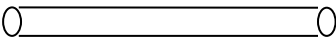
# MATHEMATICS TEST 15

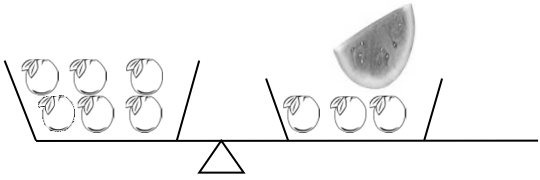
# TIME- 75 MINUTES

## SECTION 1

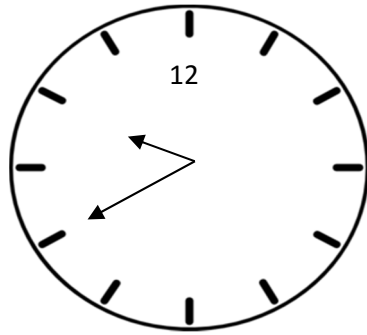
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Mark
1.	Calculate the difference between 712 and 543.  Answer:_____	<b>169</b>	
2.	Express $4\frac{2}{3}$ as a <b>DECIMAL</b> .  Answer:_____	<b>4.667</b>	
3.	What is 20% of 150?  Answer:_____	$\frac{20}{100} \times \frac{150}{1}$  <b>= 30</b>	
4.	Write ONE of the following symbols  <    =    >  in the box below so that the number sentence is correct.  $\frac{3}{4}$ <input type="text"/> $\frac{9}{12}$	<b>=</b>	

5.	<p>A welder used a piece of steel to make a square frame.</p> <p style="text-align: center;">60 cm</p>  <p>What will be the length of TWO sides of the square?</p> <p>Answer: _____</p>	<p>Perimeter of square = 60cm</p> <p>Side = <math>60 \div 4</math> = 15cm</p> <p>2 sides = <math>15 \times 2</math> = <b>30cm</b></p>	
6.	<p>When 25 is subtracted from a number and the difference divided by 3, the quotient is 15. What is the number?</p> <p>Answer: _____</p>	<p>Let number = N</p> <p><math>(N - 25) \div 3 = 15</math>  <math>15 \times 3 = 45</math>  <math>45 + 25 = 70</math>  <math>\therefore N = 70</math></p>	
7.	<p>Calculate 7135 decreased by 487.</p> <p>Answer: _____</p>	<p><math>7135 - 487</math> = <b>6648</b></p>	
8.	<p>Use each of the following digits ONLY ONCE to write the LARGEST number that can be divisible by 3.</p> <p style="text-align: center;">2, 7, 3.</p> <p>Answer: _____</p>	<p style="text-align: center;"><b>732</b></p>	
9.	<p>A 250 ml packet of juice costs \$4.50. What will be the cost of a one litre packet?</p> <p>Answer: _____</p>	<p><math>250\text{ml} = \frac{1}{4}</math>  <math>\frac{1}{4} = \\$4.50</math>  <math>1 = \\$4.50 \times 4</math>  = <b>\$18.00</b></p>	

10.	8419 mm = _____ m	$8419 \div 1000$ $= 8.419 \text{ m}$	
11.	<p>The scale below is balanced. Each orange weighs exactly 125 g.</p>  <p>What is the weight of the melon?</p> <p>Answer: _____</p>	$\text{Watermelon} = 3 \text{ oranges}$ $1 \text{ orange} = 125\text{g}$ $3 \text{ oranges} = 25 \times 3$ $= 375\text{g}$	
12	<p>A rectangle has an area of <math>84 \text{ cm}^2</math>. Calculate its width if the length of the rectangle is 12 cm.</p> <p>Answer: _____</p>	$\text{Length of rectangle} = \frac{\text{Area}}{\text{Width}}$ $= \frac{84\text{cm}^2}{12\text{cm}}$ $= 7\text{cm}$	

13.

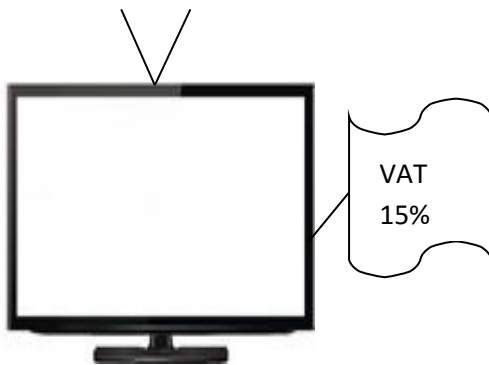


The clock shows the time Vana arrived for a doctor's appointment. She was 10 minutes late. What time should she have arrived?

Answer: \_\_\_\_\_

**9:30**

14. VAT is charged at a rate of 15%.

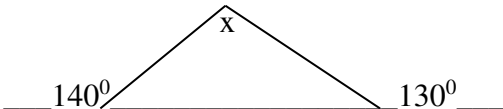


Complete the table below.

Cost Price	\$1800
VAT	
Selling Price Plus VAT	\$2070

$$\begin{aligned} \text{VAT} &= \$2070 - \$1800 \\ &= \$270 \end{aligned}$$

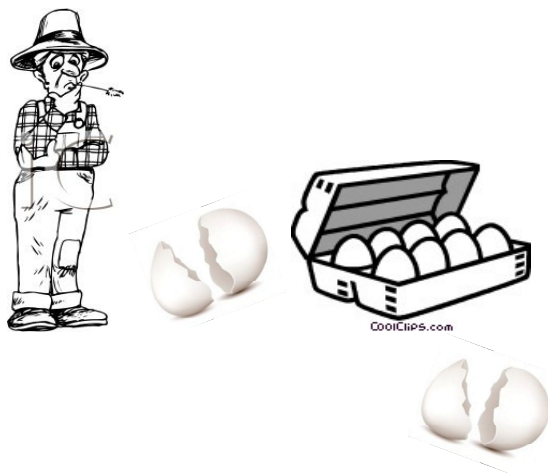
<p>15.</p>	<p>A square labelled T and a rectangle labelled J, are shown below. (<b>The shapes are not drawn to scale.</b>)</p> <div data-bbox="289 415 771 590"> </div> <p>Both shapes have the same area. Calculate the width, <math>w</math>, of the rectangle.</p> <p>Answer: _____</p>	<p style="color: red;">Area of T = <math>S \times S</math>  <math>= 10 \times 10</math>  <math>= 100\text{cm}^2</math></p> <p style="color: red;">Width of rectangle = <math>\frac{\text{Area}}{\text{Length}}</math></p> <p style="color: red;"><math>= \frac{100\text{cm}^2}{20\text{cm}}</math>  <math>= 5\text{cm}</math></p>	
<p>16.</p>	<p>Name the type of triangle shown below.</p> <div data-bbox="329 1031 716 1226"> </div> <p>Answer: _____</p>	<p style="color: red;"><b>Right Angled Triangle / Scalene Triangle</b></p>	
<p>17.</p>	<p>A cube has an edge of 11 cm. Calculate its volume.</p> <div data-bbox="354 1577 511 1766"> </div> <p>Answer: _____</p>	<p style="color: red;">Volume of cube = <math>S \times S \times S</math>  <math>= 11 \times 11 \times 11</math>  <math>= 1331\text{cm}^3</math></p>	

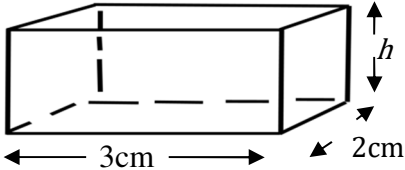

18.	<p>Calculate the size of angle x</p> <div></div> <p>Answer:_____</p>	<div><math display="block">x^0 = 180^0 - ( 50^0 + 40^0)</math><math display="block">x^0 = 180^0 - 90^0</math><math display="block">x^0 = 90^0</math></div>													
19.	<p>In a darts game Sally obtained the following points. 15, 10, 9, 12, 14. Calculate the mean number of points Sally got.</p> <p>Answer:_____</p>	<div><math display="block">\text{Mean} = \frac{15 + 10 + 9 + 12 + 14}{5}</math><math display="block">= \frac{60}{5}</math><math display="block">= 12</math></div>													
20.	<p>The table shows the results of a survey done by a Standard One teacher.</p> <table border="1"><tr><td>Shoe Size</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>No. of Children</td><td>7</td><td>13</td><td>20</td><td>15</td><td>5</td></tr></table> <p>Calculate the percentage of children that wear shoe size 5.</p> <p>Answer:_____</p>	Shoe Size	3	4	5	6	7	No. of Children	7	13	20	15	5	<div><math display="block">\text{Total number of children}</math><math display="block">= 7 + 13 + 20 + 15 + 5</math><math display="block">= 60</math><math display="block">\text{Size 5} = \frac{20}{60} \times \frac{100}{1}</math><math display="block">= 33\frac{1}{3} \%</math></div>	
Shoe Size	3	4	5	6	7										
No. of Children	7	13	20	15	5										



## SECTION 2

**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**


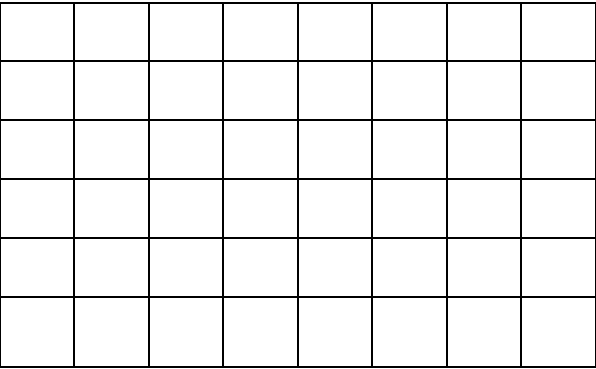
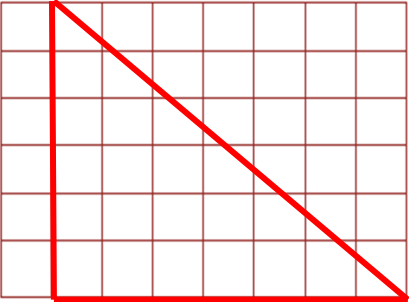
No.	Items	Working Column	Mark
21.	$12\frac{1}{2} - 7\frac{5}{8}$  Answer: _____ (2)	$  \begin{array}{r}  12\frac{1}{2} - 7\frac{5}{8} \\  = 5\frac{4}{8} - \frac{5}{8} \\  \quad \quad \quad \underline{\phantom{0}8} \\  = 4\frac{7}{8}  \end{array}  $	
22.	How many twelfths are there in $6\frac{2}{3}$ ?  Answer: _____ (2)	$  \begin{array}{l}  6\frac{2}{3} = \frac{20}{3} \\  \frac{20}{3} = \frac{\phantom{00}}{12} \\  \square = 20 \times 4 \\  = \mathbf{80 \text{ twelfths}}  \end{array}  $	
23.	$\frac{1}{3}$ of the number of students at a school is boys. If there are 160 girls in the school, how many students are there in total?  Answer: _____ (2)	$  \begin{array}{l}  \frac{2}{3} = 160 \\  1 = 160 \\  1 = \frac{160}{1} \times \frac{3}{2} \\  = \mathbf{240 \text{ students}}  \end{array}  $	
24.	There are 4 more girls than boys in a class of 40 pupils.  What percentage of the class are girls?  Answer: _____ (2)	$  \begin{array}{l}  40 - 4 = 36 \\  36 \div 2 = 18 \\  \text{Girls} = 18 + 4 \\  = 22 \\  \text{Percentage} = \frac{22}{40} \times \frac{100}{1} \\  =  \end{array}  $	
25.	The sum of two numbers is 36. The difference of the same two numbers is 24. What is the value of each number?  Answer: _____ (2)	$  \begin{array}{l}  X + Y = 36 \\  X - Y = 24 \\  36 = 6 + 30 \\  24 = 30 - 6 \\  \therefore \\  \mathbf{6 \text{ \& } 30 \text{ are the two numbers}}  \end{array}  $	

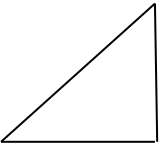
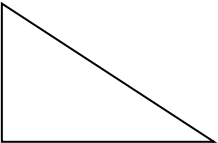


26.	<p>In a football tournament, points were awarded as follows.</p> <table><tr><td>Win</td><td>3 points</td></tr><tr><td>Draw</td><td>1 point</td></tr><tr><td>Loss</td><td>0 points</td></tr></table> <p>At the end of 5 matches a team had 7 points. It drew 1 match only. How many matches did the team lose?</p> <p>Answer: _____ (3)</p>	Win	3 points	Draw	1 point	Loss	0 points	<p>5 matches Drew = 1 7 - 1 = 6 Won = 6 ÷ 3 = 2 Total matches played = 5 Loss = 5 - (2 + 1) = 5 - 3 = 2 matches lost</p>
Win	3 points							
Draw	1 point							
Loss	0 points							
27.	<p>An egg vendor transported 360 eggs to the market. While transporting the eggs, 10% of them broke.</p> <div></div> <p>a) How many eggs were broken?</p> <p>Answer: _____ eggs (1)</p> <p>b) All the good eggs were packed into crates of 12. How many crates were used to pack these eggs?</p> <p>Answer: _____ crates (2)</p>	<p>(a) Broken = 10% x 360 = 36 eggs broken</p> <p>(b) Good eggs = 360 - 36 = 324 Crates = 324 ÷ 12 = 27 crates</p>						

28.	<p>Five years ago, Leslie was <math>\frac{3}{8}</math> his father's age. Leslie's father is now 37 years old. How old is Leslie now?</p> <p>Answer: _____ (3)</p>	<p>Five years ago Leslie's father  <math>= 37 - 5</math>  <math>= 32</math> years  <math>\therefore</math> Leslie was <math>= \frac{3}{8} \times \frac{32}{1}</math>  <math>= 12</math>  Now Leslie <math>= 12 + 5</math>  <math>= 17</math> years</p>	
29.	<p>The volume of a cuboid shown below is <math>48 \text{ cm}^3</math>.</p>  <p>Calculate the height of the cuboid.</p> <p>Answer: _____ (2)</p>	<p>Height of cuboid <math>= \frac{\text{Volume}}{\text{L} \times \text{W}}</math>  <math>= \frac{48\text{cm}^3}{3 \times 2}</math>  <math>= \frac{48\text{cm}^3}{6}</math>  <math>= 8\text{cm}</math></p>	
30.	<p>A plot of land measures 25m by 16m. A farmer plants four beds of lettuce each measuring 9m by 8m.</p>  <p>What area of the land is NOT planted?</p> <p>Answer _____ (3)</p>	<p>Area of plot of land <math>= \text{L} \times \text{W}</math>  <math>= 25 \times 16</math>  <math>= 400\text{m}^2</math></p> <p>Area of 4 beds <math>= 4 (\text{L} \times \text{W})</math>  <math>= 4 \times (9 \times 8)</math>  <math>= 4 \times 72</math>  <math>= 288\text{m}^2</math></p> <p>Area of land NOT planted  <math>= 400\text{m}^2 - 288\text{m}^2</math>  <math>= 112\text{m}^2</math></p>	

<p>31.</p>	<p>The long hand of a clock moved from 12 to 9. Through how many degrees did the long hand move?</p>  <p>Answer _____ (2)</p>	<p>1 space = <math>30^{\circ}</math>  9 spaces = <math>30^{\circ} \times 9</math>  = <b><math>270^{\circ}</math></b></p>	
<p>32.</p>	<p>A paint company charges \$100.00 to paint two broken white lines that divides a road into three lanes.</p>  <p>What will it cost to paint the broken white lines that divide a road into six lanes?</p> <p>Answer _____ (3)</p>	<p>3 lanes = 2 broken lines  6 lanes = 5 broken lines</p> <p>2 broken lines = \$100  1 broken line = <math>\\$100 \div 2</math>  5 broken lines = <math>5 \times (\\$100 \div 2)</math>  = <math>5 \times \\$50</math>  = <b>\$250</b></p>	

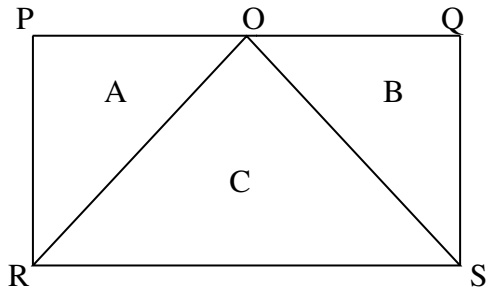
33.	<p>The table below shows the rates a telephone company charges its customers for use of its land line telephones.</p> <p>.....</p> <p>(a) Fixed monthly rental \$29.00  (b) For the first 300 minutes, \$0.18 per minute  (c) Over 300 minutes, \$0.10 per minute</p> <p>*****</p> <p>If a customer used his telephone for 375 minutes for the <b>month of July</b>, Calculate his telephone bill for that month.</p> <p>Answer _____ (3)</p>	<p>Total minutes = 375  First 300 = <math>300 \times \\$0.18</math>  = \$54  Balance = <math>375 - 300</math>  = 75  Over 300 = <math>75 \times \\$0.10</math>  = \$7.50</p> <p>Total for month of July  = \$29.00 + \$54.00 + \$7.50  = <b>\$90.50</b></p>	
34.	<p>Jesel filled her gas tank with 40 litres of gasoline. On a daily trip from Port-of-Spain to Arima the car uses 0.375 litres of a full tank of gasoline.</p> <p>(a) Calculate how many litres of gasoline the car uses to reach Arima each day.</p> <p>Answer _____ (1)</p> <p>(b) When Jesel drove to Sangre Grande, the car used 17 litres of gasoline. What <b>FRACTION</b> of gasoline did the car use for Jesel's <b>daily trip</b>?</p> <p>Answer _____ (2)</p>	<p>(a) <math>0.375 = \frac{3}{8}</math>  <math>\frac{3}{8} \times \frac{40}{1}</math>  = <b>15 litres</b></p> <p>(b) Sangre Grande = 17  Daily POS trip = <math>17 + 15</math>  = 32 litres</p> <p>Fraction used = <math>\frac{32}{40}</math>  = <math>\frac{4}{5}</math></p>	

35.	<p>The school cafeteria bought 3 dozen Transformer stickers at \$14.00 per dozen and sold them for \$2.00 EACH.</p> <p>(a) What was the profit, made by the school cafeteria?</p> <p>Answer _____ (2)</p> <p>(b) Express the profit as a <b>fraction</b> of the cost price.</p> <p>Answer _____ (1)</p>	<p>(a) C.P = \$14 x 3 = \$ 42 S.P = 36 x \$2 = \$72 Profit = \$72 - \$ 42 = <b>\$30</b></p> <p>(b) Profit Fraction = <math>\frac{30}{42}</math>  = <math>\frac{5}{7}</math></p>	
36.	<p>In the grid below draw an <b>ISOSCELES</b> triangle with an area of 24cm<sup>2</sup>.</p> <p> = 1cm<sup>2</sup></p>  <p>Answer _____ (2)</p>		

37.	<p>Ronald's average score in 5 tests is 82. His scores in 4 of the 5 tests are 90, 48, 89, and 98. Calculate his score for the FIFTH test.</p> <p>Answer _____ (2)</p>	<p>Total = <math>82 \times 5</math>  <math>= 410</math>  <math>5^{\text{th}} \text{ test} = 410 - (90 + 48 + 89 + 98)</math>  <math>= 410 - 325</math>  <math>= 85</math></p>	
38.	<p>Machael has the following plane shapes.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  A         </div> <div style="text-align: center;">  B         </div> <div style="text-align: center;">  C         </div> </div> <p>(a) Draw a diagram to show how Machael can put the three shapes together to form a parallelogram in the box below.</p> <div style="border: 1px solid black; width: 320px; height: 140px; margin: 20px auto;"></div> <p style="text-align: right;">(2)</p> <p>(b) Which labelled plane shape was flipped to form the parallelogram?</p> <p>Answer _____ (1)</p>	<p>(a)</p>  <p>(b) <b>A/B was flipped to form the parallelogram</b>        (Depends on which side the parallelogram was drawn)</p>	

39. The diagram below shows three triangles labeled **A**, **B** and **C**.

**O is the midpoint of PQ**



- (a) If the area of triangle A is  $24\text{cm}^2$ .  
What is the **area** of the rectangle PQRS?

Answer \_\_\_\_\_ (2)

- (b) Calculate the length of the rectangle, if the width is 6cm.

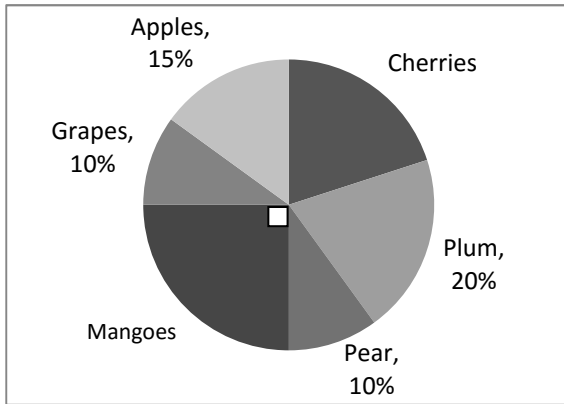
Answer \_\_\_\_\_ (1)

$$\begin{aligned} \text{(a) Area of rect.} &= 24 \times 4 \\ &= \mathbf{96\text{cm}^2} \end{aligned}$$

$$\begin{aligned} \text{(b) Length of rect.} &= \frac{\text{Area}}{W} \\ &= \frac{96\text{cm}^2}{6} \\ &= \mathbf{16\text{cm}} \end{aligned}$$

40.

The pie chart shows the favourite fruits of the pupils in Standard Five.



- a) How many pupils are in the class if 7 pupils like plums.

Answer: \_\_\_\_\_ (1)

- b) What percentage of the pupils in Std 5 favour cherries?

Answer: \_\_\_\_\_ (1)

$$(a) 20\% = \frac{1}{5}$$

$$\frac{1}{5} = 7 \text{ plums}$$

$$1 = 7 \times 5$$

$$= 35 \text{ pupils}$$

- (b) Cherries

$$= 100\% - (25\% + 10\% + 15\% + 20\% + 10\%)$$

$$= 100\% - 80\%$$

$$= 20\%$$

### SECTION 3

**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
41.	<p>Mother shared \$300.00 between her two children Jake and Sofia, giving Sofia <math>33\frac{1}{3}\%</math> more than Jake.</p> <p>(a) How much money did each child get?</p> <p>Answer: Jake _____</p> <p>Sofia _____ (2)</p> <p>(b) Sofia spent <math>\frac{1}{5}</math> of her money on a necklace and <math>\frac{1}{4}</math> of the remainder on a watch. Calculate how much money she had left.</p> <p>Answer _____ (3)</p>	<p>(a) <math>33\frac{1}{3}\% = \frac{1}{3}</math></p> <p><math>\frac{1}{3} \times \frac{300}{1} = \\$100</math></p> <p><math>\\$300 - \\$100 = \\$200</math></p> <p><math>\\$200 \div 2 = \\$100</math></p> <p><b>Jake = \$100</b></p> <p><b>Sofia = \$200</b> (\$100 + \$100)</p> <p>(b) Necklace = <math>\frac{1}{5} \times \frac{200}{1}</math></p> <p><math>= \\$40</math></p> <p><b>Remainder = \$200 - \$40</b></p> <p><math>= \\$160</math></p> <p>Watch = <math>\frac{1}{4} \times \frac{160}{1}</math></p> <p><math>= \\$40</math></p> <p><b>Money Left = \$160 - \$40</b></p> <p><b>= \$120</b></p>	

42.

Farmer John is fencing his rectangular green house using plastic and metal posts. He placed the posts 4m apart.



- (a) How many posts are needed if the length of the green house is 64m and the breadth is 12m?

Answer \_\_\_\_\_ (3)

- (b) Lettuce seedlings occupy 0.75 of the area of the greenhouse while the remainder is covered by cauliflower. What area of the greenhouse is covered by cauliflower?

Answer \_\_\_\_\_ (2)

$$\begin{aligned} \text{(a) Perimeter} &= 2L + 2W \\ &= (2 \times 64) + (2 \times 12) \\ &= 128 + 24 \\ &= 152\text{m} \end{aligned}$$

$$\begin{aligned} \text{Posts} &= 152 \div 4 \\ &= \mathbf{38 \text{ posts}} \end{aligned}$$

$$\begin{aligned} \text{(b) Lettuce} &= 0.75 \\ \text{Cauliflower} &= 0.25 \text{ or } \frac{1}{4} \end{aligned}$$

$$\begin{aligned} \text{Area of greenhouse} &= L \times W \\ &= 64 \times 12 \\ &= 768\text{m}^2 \end{aligned}$$

$$\begin{aligned} \text{Cauliflower} &= \frac{1}{4} \times \frac{768}{1} \\ &= \mathbf{192\text{m}^2} \end{aligned}$$

43.

Ashley purchased a computer from Martha's Electronic Store.



The marked price of the computer is \$12,000.00, VAT of 15% was charged.

(a) Calculate the VAT on the computer.

Answer \_\_\_\_\_ (1)

(b) Ashley paid transportation and installation fees amounting to \$700.00. How much did the computer cost her altogether?

Answer \_\_\_\_\_ (2)

(c) To pay the full amount, Ashley took a loan for 1 year at 5% Interest. Calculate her SIMPLE INTEREST.

Answer \_\_\_\_\_ (2)

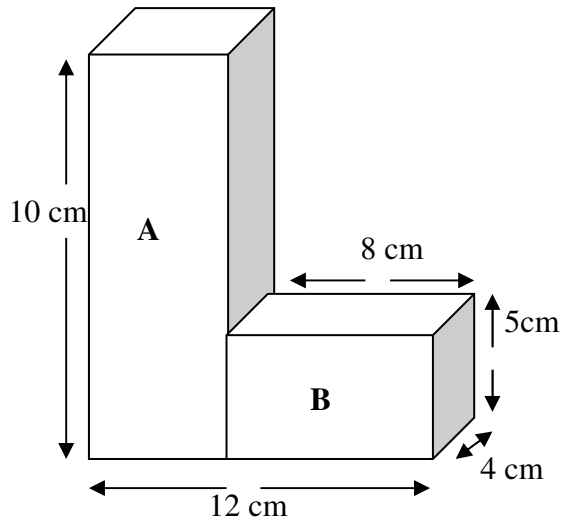
$$\begin{aligned} \text{(a) VAT} &= \frac{15}{100} \times \frac{12000}{1} \\ &= \mathbf{\$1800} \end{aligned}$$

$$\begin{aligned} \text{(b) Total Cost} \\ &= \$12000 + \$1800 + \$700 \\ &= \mathbf{\$14\,500} \end{aligned}$$

$$\begin{aligned} \text{(c) S.I} &= \frac{P \times R \times T}{100} \\ &= \frac{14500 \times 5 \times 1}{100} \\ &= \mathbf{\$725} \end{aligned}$$

44.

Two boxes were placed next to each other as shown below.



(a) Calculate the volume of box B.

Answer \_\_\_\_\_  $\text{cm}^3$  (1)

If the width of Box A and Box B are the same,

(b) Calculate the total volume of the two boxes.

Answer \_\_\_\_\_  $\text{cm}^3$  (2)

(c) How many smaller cubes with sides 2cm will exactly fit into the entire figure.

Answer \_\_\_\_\_ cubes (2)

$$\begin{aligned} \text{(a) Volume} &= L \times W \times H \\ &= 8 \times 4 \times 5 \\ &= \mathbf{160\text{cm}^3} \end{aligned}$$

$$\begin{aligned} \text{(b) Volume} &= L \times W \times H \\ &= 4 \times 4 \times 10 \\ &= 160\text{cm}^3 \end{aligned}$$

$$\begin{aligned} \text{Volume of boxes} &= 160 + 160 \\ &= \mathbf{320\text{cm}^3} \end{aligned}$$

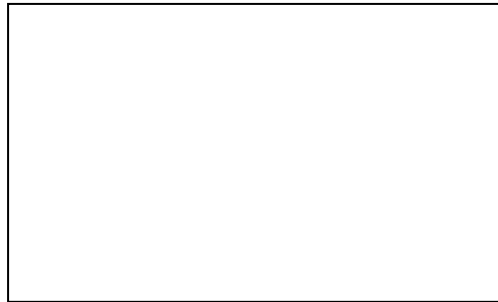
$$\begin{aligned} \text{(c) Smaller cubes} &= \frac{320\text{cm}^3}{8\text{cm}^3} \\ &= \mathbf{40 \text{ smaller cubes}} \end{aligned}$$

45.

Complete the statement.

- (a) A triangular prism has 2 \_\_\_\_\_ faces and \_\_\_\_\_ rectangular faces. (2)

- (b) Draw the net of a triangular prism in the space provided.



(1)

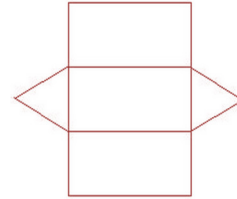
- (c) Seven identical triangular prisms of base 10cm are put together to form a straight line.

What is the total length of the combined triangular prisms?

Answer \_\_\_\_\_ (2)

- (a) **Triangular faces**  
**3 rectangular faces**

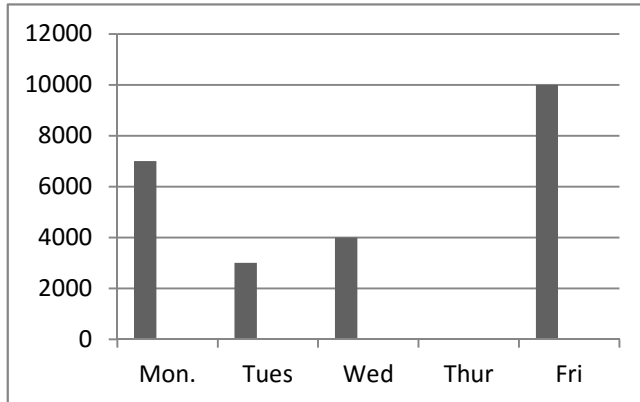
(b)



- (c)  **$7 \times 10 = 70\text{cm}$**

46.

The incomplete bar graph shows newspaper sales for the period Monday to Friday.



- (a) If the total sales for the period was 30,000 newspapers. How many newspapers were sold on Thursday?

Answer \_\_\_\_\_ (2)

- (b) Complete the bar graph to show Thursday's sales. (1)

- (c) On which day was the most newspaper sold?

Answer \_\_\_\_\_ (1)

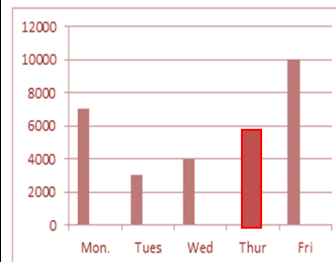
- (d) How many more newspapers were sold on Monday than on Tuesday?

Answer \_\_\_\_\_ (1)

(a) Thursday  
 $= 30\,000 - (7000 + 3000 + 4000 + 10000)$

$= 30000 - 24000$   
 $= 6000$

(b)



(c) Friday

(c) Difference  
 $= 7000 - 3000$   
 $= 4000$

END OF TEST 15

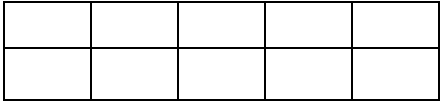

# TEST 16

# MATHEMATICS TEST 16

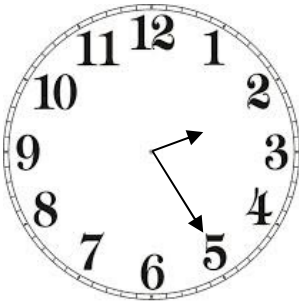
TIME- 75 MINUTES

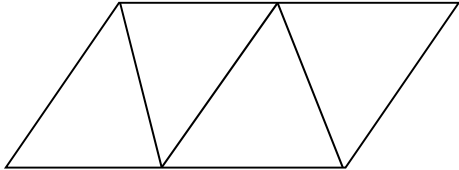
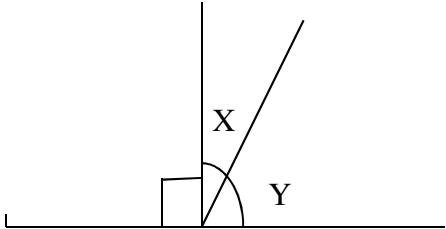
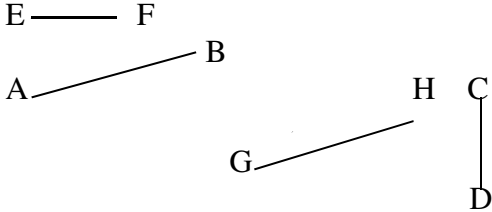
## SECTION 1

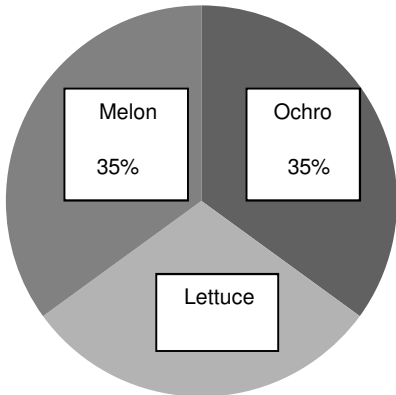
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Mark
1.	Write in figures:  Seven hundred and two thousand and nine.  Answer _____	<b>702 009</b>	
2.	Multiply:  124 by 25  Answer _____	<b>124 x 25 = 3100</b>	
3.	Express 0.375 as a percent.  Answer _____	<b>0.375 x 100 = 37.5%</b>	
4.	Shade $\frac{3}{5}$ of the shape below.  		
5.	MULTIPLY :  $\sqrt{144}$ x 6  Answer _____	<b><math>\sqrt{144}</math> x 6 = 12 x 6 = 72</b>	

6.	<p>Calculate the difference between 26 and 2.6</p> <p>Answer _____</p>	$\begin{array}{r} 26.0 - \\ \underline{2.6} \\ 23.4 \end{array}$	
7.	<p>Complete the statement below:</p> <p><math>384 + 29 = 129 + \square</math></p> <p>Answer _____</p>	$\begin{array}{l} 384 + 29 = 413 \\ 413 - 129 \\ \square = 284 \end{array}$	
8.	<p>The scores made by 5 batsmen were as follows:</p> <p>39, 12, 47, 12, 5</p> <p>What is the <b>mode</b> of the scores?</p> <p>Answer _____</p>	<p><b>12</b></p>	
9.	<p>A length of wood, 2.4m long is divided into strips. Each strip is 0.08m long.</p> <p>How many strips can be obtained from the length of wood?</p> <p>Answer _____</p>	$\begin{array}{l} 2.4 \div 0.08 \\ = 240 \div 8 \\ = \mathbf{30 \text{ strips}} \end{array}$	
10.	<p>Express 36 cents as a decimal fraction of \$2.00.</p> <p>Answer _____</p>	$\begin{array}{l} \frac{36}{200} = \frac{18}{100} \\ 18 \div 100 \\ = \mathbf{0.18} \end{array}$	

11.	<p>Father arrived at his office at 8:10 am. If his journey took him <math>\frac{2}{3}</math> hours, at what time did he leave home?</p> <p>Answer _____</p>	$\frac{2}{3} \times \frac{60}{1} = 40 \text{ mins}$ $8:10 - :40$ $= \mathbf{7:30 \text{ am}}$	
12.	<p>Jerry earned \$640.00 for working 40 hours. Calculate his hourly rate of pay.</p> <p>Answer _____</p>	$40 \text{ hours} = \$640$ $1 \text{ hour} = \$640 \div 40$ $= \mathbf{\$16}$	
13.	<div style="border: 1px solid black; padding: 2px; display: inline-block;">1 Litre = 1000cm<sup>3</sup>.</div> <p>How many litres of water will fill a tank that has a volume of 25,000cm<sup>3</sup>?</p> <p>Answer _____</p>	$25000 \div 1000$ $= \mathbf{25 \text{ L}}$	
14.	<p>The clock shown below is 25 minutes fast.</p>  <p>To which number should the longer hand point to show the correct time?</p> <p>Answer _____</p>	<p style="text-align: center;"><b>12</b></p>	

15.	<p>A girl has two pieces of ribbon. The first piece is 0.5cm longer than the second piece.</p> <p>If the second piece is 15.75cm long, calculate the length of the first piece.</p> <p>Answer _____</p>	$15.75 + 0.5$ $= 16.25\text{cm}$	
16.	<p>Name the solid that can be formed from the net shown below.</p>  <p>Answer _____</p>	<p><b>Triangular Based Pyramid</b></p>	
17.	<p>Angle X is <math>\frac{1}{2}</math> the size of angle Y.</p>  <p>Calculate the value of angle X.</p> <p>Answer X = _____ degrees.</p>	$Y = 2X$ $\therefore 3X = 90^\circ$ $X^\circ = 90^\circ \div 3$ $X^\circ = 30^\circ$	
18.	<p>Which line is parallel to AB?</p>  <p>Answer _____</p>	<p><b>GH</b></p>	

19.	<p>The table shows the shoe size of a Standard Four Class.</p> <table><tr><td>Shoe Size</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Number of Children</td><td>13</td><td>20</td><td>15</td><td>5</td></tr></table> <p>What was the modal shoe size?</p> <p>Answer _____</p>	Shoe Size	4	5	6	7	Number of Children	13	20	15	5	<p>Size 5</p>	
Shoe Size	4	5	6	7									
Number of Children	13	20	15	5									
20.	<p>The pie chart shows a plot of land owned by Mr. Joe. What percentage of his land is used for planting Lettuce?</p> <div></div> <p>Answer _____</p>	<p>Lettuce = 100% - (35% + 35%) = 100% - 70% = 30%</p>											

## SECTION 2

**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
21.	<p>Two of the five boxes are equally filled with crayons.</p> <div style="display: flex; justify-content: center; gap: 10px;"> <div style="border: 1px solid black; width: 40px; height: 30px;"></div> <div style="border: 1px solid black; width: 40px; height: 30px;"></div> <div style="border: 1px solid black; width: 40px; height: 30px;"></div> <div style="border: 1px solid black; width: 40px; height: 30px;"></div> <div style="border: 1px solid black; width: 40px; height: 30px;"></div> </div> <p>If there are 36 crayons in two boxes, how many crayons can fill all the boxes?</p> <p>Answer _____ (2)</p>	$36 \div 2 = 18 \text{ crayons/box}$ $5 \text{ boxes} = 18 \times$ $= \mathbf{90 \text{ crayons}}$	
22.	<p>There are 126 children registered for a camp.</p> <p>What is the least number of rooms needed to house the children if each room can hold 8 children?</p> <p>Answer _____ (2)</p>	$126 \div 8$ $= 15 + 1$ $= \mathbf{16 \text{ rooms}}$	
23.	<p>Randy walked 1560 metres and cycled 2340 metres.</p> <p>What is the total distance Randy covered in <b>kilometres</b>?</p> <p>Answer _____ km (2)</p>	$1560\text{m} = 1.560\text{km}$ $2340\text{m} = 2.340\text{km}$ $1.56 + 2.34$ $= \mathbf{3.90\text{km}}$	

24.	<p>At a party each child was given <math>\frac{1}{8}</math> of a pizza. Ian bought 9 pizzas. When the children were finished eating there were <math>1\frac{3}{4}</math> pizzas left?</p> <p>How many children were at the party?</p> <p>Answer _____ (2)</p>	$1\frac{3}{4} = \frac{7}{4}$ $\frac{7}{4} = \frac{\quad}{8}$ $\square = 14$ $9 \text{ pizzas} = 9 \times 8$ $= 72$ $\text{Left} = 14$ $\text{Children at party} = 72 - 14$ $= \mathbf{58}$																	
25.	<p>One fifth of the sum of two numbers is 40. One of the numbers is 90. What is the other number?</p> <p>Answer _____ (3)</p>	$\frac{1}{5} \times (90 + \square) = 40$ $90 + \square = 40 \times 5$ $90 + \square = 200$ $\square = 200 - 90$ $\square = \mathbf{110}$																	
26.	<p>The table below shows a part of Debra's Report.</p> <p style="text-align: center;"><b><u>Term Test Records</u></b></p> <table border="1"> <thead> <tr> <th>Subject</th><th>Maximum Marks</th><th>Marks Earned</th><th>%</th></tr> </thead> <tbody> <tr> <td>Mathematics</td><td>60</td><td>45</td><td></td></tr> <tr> <td>Language Arts</td><td>50</td><td>40</td><td></td></tr> <tr> <td>ELA</td><td>40</td><td>35</td><td></td></tr> </tbody> </table> <p>(a) What percentage did Debra make in Language Arts?</p> <p>Answer _____ (1)</p> <p>(b) In which subject did she score the highest percentage?</p> <p>Answer _____ (2)</p>	Subject	Maximum Marks	Marks Earned	%	Mathematics	60	45		Language Arts	50	40		ELA	40	35		<p>(a) Language Arts = <math>\frac{40}{50} \times \frac{100}{1}</math></p> <p style="text-align: right;"><math>= \mathbf{80\%}</math></p> <p>(b) <math>\frac{45}{60} \times \frac{100}{1} = 75\%</math></p> <p><math>\frac{35}{40} \times \frac{100}{1} = 87.5\%</math></p> <p><math>\therefore</math> Highest percentage scored in <b>ELA</b></p>	
Subject	Maximum Marks	Marks Earned	%																
Mathematics	60	45																	
Language Arts	50	40																	
ELA	40	35																	

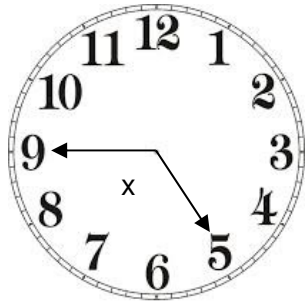
27.	<p>Four digits are shown below.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 2px 5px;">5</div> <div style="border: 1px solid black; padding: 2px 5px;">9</div> <div style="border: 1px solid black; padding: 2px 5px;">8</div> <div style="border: 1px solid black; padding: 2px 5px;">7</div> </div> <p>Using EACH digit only ONCE, write the:</p> <p>(a) SMALLEST four-digit number</p> <p>Answer _____ (1)</p> <p>(b) LARGEST four-digit Even number.</p> <p>Answer _____ (2)</p>	<p>(a) <b>5789</b></p> <p>(b) <b>9758</b></p>	
28.	<p>The difference of two numbers is <math>10\frac{5}{12}</math>.</p> <p>One of the numbers is 16.</p> <p>What is the other number?</p> <p>Answer _____ (2)</p>	<p><math>16 - 10\frac{5}{12}</math>  <math>= 5\frac{7}{12}</math></p>	
29.	<p>PEN - \$1.25          PENCIL - 75¢</p> <p>How much change should I receive from \$40.00 after buying a dozen pens and 8 pencils?</p> <p>Answer _____ (2)</p>	<p>12 pens = \$1.25 x 12          = \$15          8 pencils = \$0.75 x 8          = \$6          Total = \$15 + \$6          = \$21          Change = \$40 - \$21          = <b>\$19</b></p>	
30.	<p>An aquarium measures 4m by 3m by 2m.</p> <p>What is the volume of the aquarium?</p> <p>Answer _____ (2)</p>	<p>Volume of aquarium = L x W x H          = 4 x 3 x 2          = <b>24m<sup>3</sup></b></p>	

31.	<p>Apples are sold at 2 for \$3.00. Oranges are sold at 3 for \$2.00 Kerry-Ann bought 4 apples and paid with a \$10.00 bill.</p> <p>How many oranges can she buy with the remainder of the money?</p> <p>Answer _____ (2)</p>	<p>2 apples = \$3 1 apple = <math>\frac{3}{2}</math> 4 apples = <math>\frac{3}{2} \times \frac{4}{1}</math> = \$6 Paid = \$10 – \$6 Change = \$4</p> <p>\$2 = 3 oranges \$1 = <math>\frac{3}{2}</math> \$4 = <math>\frac{3}{2} \times \frac{4}{1}</math> = <b>6 oranges</b></p>	
32.	<p>The cash price of a stove is \$2800.00. The hire purchase plan consists of a down payment of \$450.00 plus \$250.00 per month for 16 months.</p> <p>(a) Calculate the cost of the stove using the hire purchase plan.</p> <p>Answer _____ (2)</p> <p>(b) How much will someone save if the stove was bought at the cash price?</p> <p>Answer _____ (1)</p>	<p>(a) Hire Purchase plan = (16 x \$250) + \$450 = \$4000 + \$450 = <b>\$4450</b></p> <p>(b) Save = \$4450 - \$2800 = <b>\$1650</b></p>	

33.	<p>The sign on Johnny's Mini Mart reads:</p> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <p>Opening Hours: 8:00 am – 5:00pm</p> </div> <p>Thomas arrived at the Mini Mart at 7:25 am and waited until it was open.</p> <p>(a) How long did Thomas wait for the Mini Mart to open?</p> <p>Answer _____ (1)</p> <p>He spent 45 minutes getting groceries for his family.</p> <p>(b) Calculate the time he left the Mini Mart.</p> <p>Answer _____ (2)</p>	<p>(a) <math>8:00 - 7:25</math> <math>= 35 \text{ minutes}</math></p> <p>(b) <math>8:00 + 0:45</math> <math>= 8:45\text{am}</math></p>	
34.	<p>The perimeter of a rectangle is 96cm. If the width is 18cm.</p> <p>Calculate:</p> <p>(a) The length of the rectangle.</p> <p>Answer _____ (1)</p> <p>(b) The area of the rectangle.</p> <p>Answer _____ (1)</p>	<p>(a) <math>\text{Length} = (\text{Perimeter} - 2W) \div 2</math>  <math>= (96 - [18 \times 2]) \div 2</math>  <math>= (96 - 36) \div 2</math>  <math>= 60 \div 2</math>  <math>= 30\text{cm}</math></p> <p>(b) <math>\text{Area of rectangle} = L \times W</math>  <math>= 30 \times 18</math>  <math>= 540\text{cm}^2</math></p>	

35.	<p>A table measuring 140 cm by 75 cm is covered with a table cloth.</p> <p>(a) Calculate the area of the table.</p> <p>Answer _____ (1)</p> <p>(b) If the cloth measured 200cm by 125cm, calculate how much cloth will hang at the sides of the table?</p> <p>Answer _____ (2)</p>	<p>(a) Area of table = <math>L \times W</math> = <math>140 \times 75</math> = <b>10500cm<sup>2</sup></b></p> <p>(b) Area of cloth = <math>L \times W</math> = <math>200 \times 125</math> = 25000</p> <p>Extra cloth = <math>25000 - 10500</math> = <b>14500cm<sup>2</sup></b></p>					
36.	<p>Match the shape to its properties using arrows.</p> <table><tr><td>Triangular based pyramid</td><td>4 faces , 4 vertices, 6 edges.</td></tr><tr><td>Triangular prism</td><td>5 faces, 6 vertices, 9 edges.</td></tr></table> <p>(2)</p>	Triangular based pyramid	4 faces , 4 vertices, 6 edges.	Triangular prism	5 faces, 6 vertices, 9 edges.	<p>Triangular based pyramid = <b>4 faces, 4 vertices, 6 edges</b></p> <p>Triangular prism = <b>5 faces, 6 vertices, 9 edges.</b></p>	
Triangular based pyramid	4 faces , 4 vertices, 6 edges.						
Triangular prism	5 faces, 6 vertices, 9 edges.						

37.



The minute hand of the clock moved from 5 to 9 as shown.

(a) Circle the term listed below that BEST describes angle x.

- Right angle      \* Acute Angle
- Obtuse Angle    \* Reflex Angle

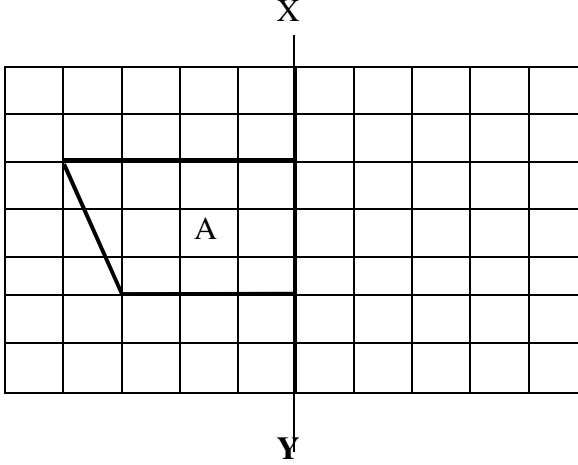
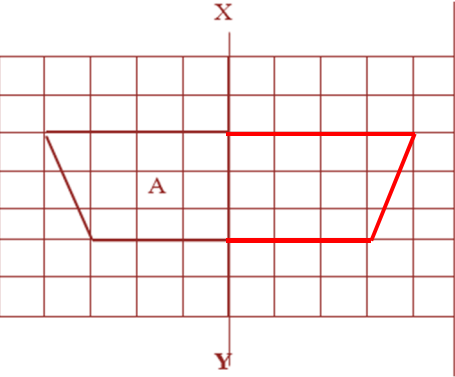
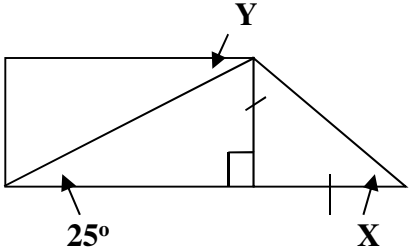
Answer \_\_\_\_\_ (1)

(b) What fraction of a full turn did the minute hand make?

Answer \_\_\_\_\_ (1)

(a) Minute hand moved = 4 spaces  
 1 space =  $30^{\circ}$   
 4 spaces =  $30^{\circ} \times 4$   
 =  $120^{\circ}$  – **Obtuse Angle**

(b) Fraction =  $\frac{120}{360}$   
 =  $\frac{1}{3}$

<p>38.</p>	 <p>(a) Flip figure A along the mirror line XY. (1)</p> <p>(b) Name the combined shape.</p> <p>Answer _____ (1)</p>	 <p>(b) Trapezium</p>
<p>39.</p>	<p>Three triangles were joined together as shown.</p>  <p>Calculate the difference between angle X and Y.</p> <p>Answer _____ (2)</p>	<p>Angle X = <math>(180^\circ - 90^\circ) \div 2</math>  <math>= 90^\circ \div 2</math>  <math>= 45^\circ</math></p> <p>Angle Y = <math>25^\circ</math></p> <p>Difference = <math>45^\circ - 25^\circ</math>  <math>= 20^\circ</math></p>

40.  $\frac{1}{3}$  of Carol's allowance is \$20.00.

Complete the bar chart to show the remainder of her allowance that Carol spent on Wednesday.

$$\frac{1}{3} = \$20$$

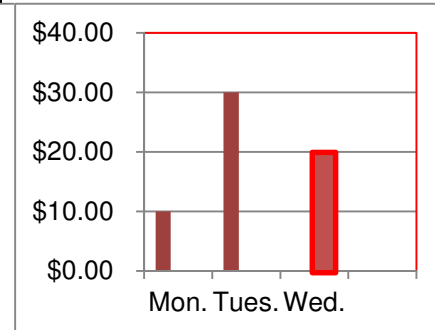
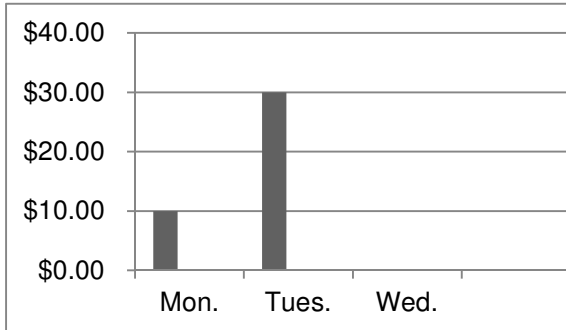
$$1 = \$20 \times 3$$

$$= \$60$$

$$\text{Remainder} = \$60 - (\$30 + \$10)$$

$$= \$60 - \$40$$

$$= \$20$$



Answer \_\_\_\_\_ (3)

### SECTION 3

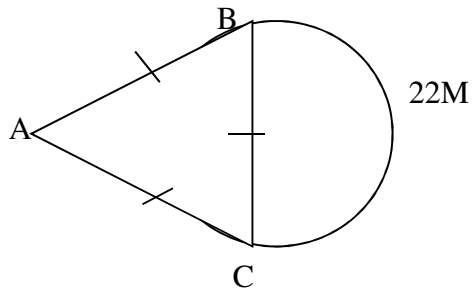
**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
41.	<p>325 people are going on a Bird Watching Trip. They can pay for either 25-seater boats or 12-seater boats.</p> <p>(a) What is the maximum number of 25-seater boats they should pay for if all the people chose 25-seater boats?</p> <p>Answer _____ (1)</p> <p>(b) They decided to use both 25-seater and 12-seater boats. If they paid for 12 of the 12 seater boats, how many 25-seater boats would they need?</p> <p>Answer _____ (2)</p> <p>(c) A 25-seater boat costs \$750.00. A 12-seater boat costs \$300.00.</p> <p>Calculate the cost for ALL the boats paid for in part (b).</p> <p>Answer _____ (2)</p>	<p>(a) <math>325 \div 25</math> = <b>13</b> – 25-seater boats</p> <p>(b) <math>12 - 12\text{seaters} = 12 \times 12</math> = 144 Remainder = <math>325 - 144</math> = 181 Number of 25 seaters needed = <math>181 \div 25</math> = 7 rem. 6 <math>\therefore</math> <b>8 – 25 seaters would be needed</b></p> <p>(c) <math>12 - 12 \text{ seaters} = 12 \times \\$300</math> = \$3600</p> <p><math>8 - 25 \text{ seaters} = 8 \times \\$750</math> = \$6000</p> <p>Total = \$6000 + \$3600 = <b>\$ 9600</b></p>	

42.	<p>A Primary School has 15 classes. Each class has 25 students.</p> <p>(a) Calculate the students' population at the school.</p> <p>Answer _____(1)</p> <p>(b) After writing the S.E.A. examination, 47 children left the school. The Principal took in two First Year classes.</p> <p>How many children were in each First Year class if the TOTAL student population was now 370 students?</p> <p>Answer _____(3)</p> <p>(c) How many classes are there now if the number in each class does NOT exceed 25 students?</p> <p>Answer _____ (1)</p>	<p>(a) Population = <math>25 \times 15</math> = <b>375 students</b></p> <p>(b) Total = 375 Left = 47 Remained = <math>375 - 47</math> = 328</p> <p>New Population = 370 First Year = <math>370 - 328</math> = 42 students One class = <math>42 \div 2</math> = <b>21 students</b></p> <p>(c) Number of classes = <math>370 \div 25</math> = 14 rem. 20 = <b>15 classes</b></p>	
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43.

A semi-circle and an equilateral triangle are joined as shown.



Using the information given in the diagram, calculate:

- (a) The diameter of the semi-circle BC.

Answer \_\_\_\_\_ (3)

- (b) The perimeter of the shape.

Answer \_\_\_\_\_ (2)

$$\begin{aligned} \text{(a) Diameter} &= \text{Circumference} \div \pi \\ &= (22 \times 2) \div \frac{22}{7} \\ &= \frac{44}{1} \times \frac{7}{22} \\ &= \mathbf{14m} \end{aligned}$$

$$\begin{aligned} \text{(b) Perimeter} &= 14 + 14 + 22 \\ &= \mathbf{50m} \end{aligned}$$

44.

The table shows the wage a construction worker receives:

Regular Time	\$160.00 per hour for first 40 hrs per week.
Over Time	1 ½ times Regular Time Wage.

Sam works 52 hours for a particular week.

(a) Calculate his overtime pay.

Answer \_\_\_\_\_ (2)

(b) Calculate his total earnings for the week.

Answer \_\_\_\_\_ (1)

(c) If he earns \$8800.00 for the next week, how many hours overtime did he work?

Answer \_\_\_\_\_ (2)

(a) Overtime hours = 52 – 40  
= 12 hours  
1 hour overtime = \$160 x 1.5  
= \$ 240  
12 hours overtime = \$240 x 12  
= **\$2880**

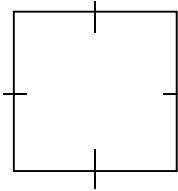
(b) Total Earnings

Regular hours = \$160 x 40  
= \$6400  
Overtime hours = \$2880  
= \$6400 + \$2880  
= **\$9280**

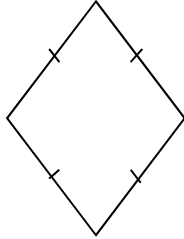
(c) Earned = \$8800  
Overtime = \$8800 - \$6400  
= \$ 2400 ÷ \$240  
= **10 hours overtime**

45.

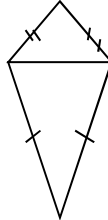
**A**



**B**



**C**



(a) Name the shapes above:

A \_\_\_\_\_

B \_\_\_\_\_

C \_\_\_\_\_ (3)

(b) Which shape has one line of symmetry?

Answer \_\_\_\_\_ (1)

(c) Which of the above shapes has 4 lines of symmetry?

Answer \_\_\_\_\_ (1)

(a) A – **Square**  
B – **Rhombus**  
C- **Kite**

(b) C – **Kite**

(c) A - **Square**

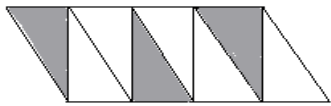
46.	<p>After 4 innings, Brian's mean score in cricket was 52.</p> <p>(a) What was his total score in the four innings?</p> <p>Answer _____ (1)</p> <p>(b) In a fifth inning, Brian scored 67 runs. What was his new mean score?</p> <p>Answer _____ (2)</p> <p>(c) Brian wants to improve his mean score to 60. What should he score in his sixth innings?</p> <p>Answer _____ (2)</p>	<p>(a) Total = Mean x N(n)  <math>= 52 \times 4</math>  <math>= \mathbf{208 \text{ runs}}</math></p> <p>(b) New Mean = <math>(208 + 67) \div 5</math>  <math>= 275 \div 5</math>  <math>= \mathbf{55 \text{ runs}}</math></p> <p>(c) Total should be = <math>60 \times 6</math>  <math>= 360</math>  New score = <math>360 - 275</math>  <math>= \mathbf{85 \text{ runs}}</math></p>	
	END OF TEST 16		

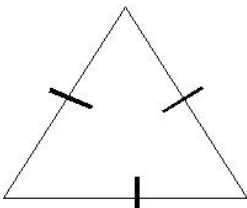
# TEST


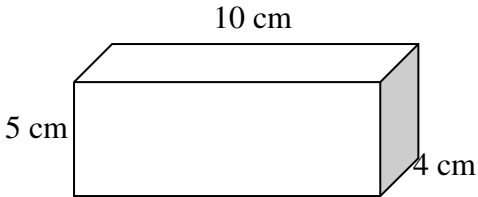
# 17

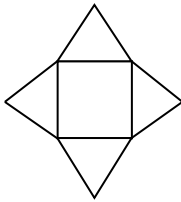
## SECTION 1

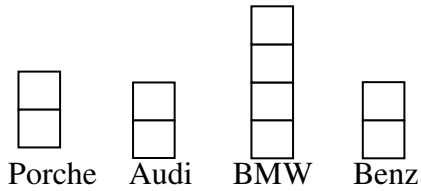
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Marks
1.	Express as a single number.  $(5 \times 100000) + (3 \times 1000) + (2 \times 10) + (9 \times 1)$  Answer _____	<b>503029</b>	
2.	What fraction of the figure is shaded?   Answer _____	<b><math>\frac{3}{8}</math></b>	
3.	15 minutes is what decimal fraction of 1 hour?  Answer _____	$\frac{15}{60} = \frac{1}{4}$ $\frac{1}{4} = \mathbf{0.25}$	
4.	Solve  $3.5 \div 0.25$  Answer _____	$3.5 \div 0.25$ $= 350 \div 25$ $= \mathbf{14}$	

5.	<p>State the name of the triangle below.</p> <div></div> <p>Answer _____</p>	<p><b>Equilateral Triangle</b></p>																					
6.	<p>Complete the number pattern.</p> <p>1, 2, 4, 8, 16, _____, 64.</p> <p>Answer _____</p>	<p><b>16 x 2 =32</b></p>																					
7.	<p>If 6 x Y = 36.</p> <p>What is the value of 4 x Y.</p> <p>Answer _____</p>	<p><b>6 x Y = 36</b> <b>Y = 36 ÷ 6</b> <b>Y = 6</b> <b>4 x Y = 4 x 6</b> <b>= 24</b></p>																					
8.	<p>What percent of 20 is 12?</p> <p>Answer _____</p>	<p><b><math>\frac{12}{20} \times \frac{100}{1}</math></b> <b>= 60%</b></p>																					
9.	<p>Solve:</p> <table><tr><td>m</td><td>cm</td></tr><tr><td>28</td><td>44</td></tr><tr><td>- 5</td><td>82</td></tr><tr><td>_____</td><td>_____</td></tr><tr><td>_____</td><td>_____</td></tr></table> <p>Answer _____</p>	m	cm	28	44	- 5	82	_____	_____	_____	_____	<table><tr><td>m</td><td>cm</td></tr><tr><td>28 27</td><td>144</td></tr><tr><td>- 5</td><td>82</td></tr><tr><td>_____</td><td>_____</td></tr><tr><td>22</td><td>62</td></tr></table> <p><b>22m 62 cm</b></p>	m	cm	28 27	144	- 5	82	_____	_____	22	62	
m	cm																						
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m	cm																						
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- 5	82																						
_____	_____																						
22	62																						

10.	<p>Jan earns \$12.50 per hour. He works 8 hours per day, Calculate his daily wage.</p> <p>Answer _____</p>	<p>1 hour = \$12.50  8 hours = \$12.50 x 8  = <b>\$100</b></p>	
11.	<p>A tennis match began at 3:25 pm and ended at 5:00 pm.</p> <p>How long did the match take?</p> <p>Answer _____ hours and _____ minutes.</p>	<p>5:00 – 3:25  = <b>1 hour 35 minutes</b></p>	
12.	<p>How many lines of symmetry are there in the rectangle?</p>  <p>Answer _____</p>	<p><b>2 lines of symmetry</b></p>	
13.	<p>Calculate the volume of the cuboid.</p>  <p>Answer _____</p>	<p>Volume of cuboid = L x W x H  = 10 x 5 x 4  = <b>200cm<sup>3</sup></b></p>	

14.	<p>For every 3 handclaps a boy makes, he jumps twice. If he jumps 1 dozen times, how many handclaps did he make?</p> <p>Answer _____</p>	<p>2 jumps = 3 handclaps  1 jump = <math>\frac{3}{2}</math>  12 jumps = <math>\frac{3}{2} \times \frac{12}{1}</math>  = <b>18 handclaps</b></p>	
15.	<p>Complete the statement.</p> <p>2.8L = _____ ml</p> <p>Answer _____</p>	<p>2.8 L = 2.8 x 1000  = <b>2800 ml</b></p>	
16.	<p>A vendor sells 80 coconuts on Saturday and 20 less on Sunday.</p> <p>What was his total for the two days?</p> <p>Answer _____</p>	<p>Saturday = 80 coconuts  Sunday = 80 – 20  = 60</p> <p>S &amp; S = 80 + 60  = <b>140 coconuts</b></p>	
17.	<p>Name the solid that represents the shape below?</p>  <p>Answer _____</p>	<p><b>Square-based pyramid</b></p>	

18.	<p>A pupil left home at 7:15 am and arrived at school <math>1\frac{1}{5}</math> hours later. At what time did he arrive at school?</p> <p>Answer _____</p>	$\frac{1}{5} \times \frac{60}{1} = 12 \text{ minutes}$ $7:15 + 1:12 = \mathbf{8:27 \text{ am}}$	
19.	<p>The average of two numbers is 14. If one of the number is 8, what is the other number?</p> <p>Answer _____</p>	$\begin{aligned} \text{Total} &= 14 \times 2 \\ &= 28 \\ X + 8 &= 28 \\ X &= 28 - 8 \\ &= \mathbf{20} \end{aligned}$	
20.	<p>The graph below shows Randy's toy car collection.</p> <div style="text-align: center;">  <p>Porche   Audi   BMW   Benz</p> <p><input type="checkbox"/> Represents 5 toy cars</p> </div> <p>What is the total number of toy cars in Randy's collection?</p> <p>Answer _____</p>	$10 \times 5 = \mathbf{50 \text{ cars}}$	

## SECTION 2

**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
21.	How many 250 gram packets of curry powder can I get from $4\frac{1}{4}$ kg?  Answer _____ (2)	$250\text{g} = \frac{1}{4}$ $4\frac{1}{4} = \frac{17}{4}$ $\therefore 17 - 250\text{g packets}$	
22.	A machine produces 5 buttons every 10 seconds. How many buttons can be produced in 3 minutes?  Answer _____ (2)	$10 \text{ seconds} = 5 \text{ buttons}$ $60 \text{ seconds} = 6 \times 5$ $= 30 \text{ buttons}$ $1 \text{ minute} = 30 \text{ buttons}$ $3 \text{ minutes} = 30 \times 3$ $= 90 \text{ buttons}$	
23.	Students from a class stand in a straight line for a march past competition. If they stand three metres apart and the distance between the first and last child is 24 metres, how many children were standing in the line?  Answer _____ (2)	$24 \div 3 = 8$ $8 + 1 = 9 \text{ children}$	
24.	Calculate the difference between $6\frac{1}{4}$ and $4\frac{5}{8}$ .  Answer _____ (2)	$6\frac{1}{4} - 4\frac{5}{8}$ $\underline{2\ 1\ \underline{2}^{10} - 5} = 1\frac{5}{8}$ $8$	

25.	<p>There are 7 green, 12 red and 6 yellow pens in a box. What percentage of the pens is yellow?</p> <p>Answer _____ (2)</p>	<p>Total = 7 + 12 + 6 = 25 pens</p> <p>Yellow = <math>\frac{6}{25} \times \frac{100}{1}</math>  = <b>24%</b></p>	
26.	<p>A number, after having been increased by 20% was 600.</p> <p>What was the original number?</p> <p>Answer _____ (3)</p>	<p>120% = 600</p> $\frac{120}{100} = 600$ $\frac{6}{5} = 600$ $1 = \frac{600}{1} \times \frac{5}{6}$ <p>= <b>500</b></p>	
27.	<p>Mr. Sam uses <math>\frac{3}{5}</math> of his salary to pay his rent. He saved <math>\frac{1}{2}</math> of the remainder. He was left with \$800.00.</p> <p>(a) How much was Mr. Sam's salary?</p> <p>Answer \$ _____ (2)</p> <p>(b) How much did he spend on his rent?</p> <p>Answer \$ _____ (1)</p>	<p>(a) Rent = <math>\frac{3}{5}</math></p> <p>Remainder = <math>\frac{2}{5}</math></p> <p>Saved = <math>\frac{1}{2} \times \frac{2}{5}</math> = <math>\frac{1}{5}</math></p> <p>Left with = \$800</p> $\frac{1}{5} = \$800$ $1 = \$800 \times 5$ <p>= <b>\$4000</b></p> <p>(b) Rent = <math>\frac{3}{5} \times \frac{4000}{1}</math> = <b>\$2400</b></p>	

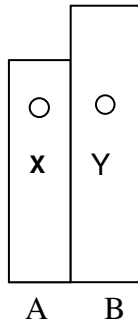
28.	<p>Oranges are placed in boxes each containing 4 layers. Each orange has a weight of 50 grams and all the oranges weighed 4kg .</p> <p>Calculate:</p> <p>(a) How many oranges were packed in ONE box?</p> <p>Answer _____ (2)</p> <p>(b) How many oranges were there in EACH layer?</p> <p>Answer _____ (1)</p>	<p>(a) 1 box = 4000g 1 orange = 50g No. of oranges in box = <math>4000 \div 50</math> = <b>80 oranges</b></p> <p>(b) 4 layers = 80 oranges 1 layer = <math>80 \div 4</math> = <b>20 oranges</b></p>	
29.	<p>A pen and pencil together cost \$9.30. The pen costs \$4.20 more than the pencil.</p> <p>Calculate the cost of the pen.</p> <p>Answer _____ (2)</p>	<p><math>\\$9.30 - \\$4.20 = \\$5.10</math></p> <p><math>\\$5.10 \div 2 = \\$2.55</math></p> <p>Pencil = \$2.55 Pen = <math>\\$2.55 + \\$4.20</math> = <b>\$ 6.75</b></p>	
30.	<p>The cost price of a table is \$1500.00. If VAT is 15%, how much will the table cost?</p> <p>Answer _____ (2)</p>	<p><math>C.P + VAT = 100\% + 15\%</math> = 115%</p> <p><math>\frac{115}{100} \times \frac{1500}{1}</math></p> <p>= <b>\$1725</b></p>	
31.	<p>Two containers weigh <math>5\frac{1}{2}</math> kg. If one container weighs <math>3\frac{7}{8}</math> kg, What is the weight of the other container?</p> <p>Answer _____ (2)</p>	<p><math>5\frac{1}{2} - 3\frac{7}{8}</math></p> <p>= <math>2\ 1\frac{124 - 7}{8}</math></p> <p>= <b><math>1\frac{5}{8}</math> kg</b></p>	

32.	<p>The perimeter of a square is 5.6cm. What is its area?</p> <p>Answer _____ (2)</p>	<p>Perimeter = 5.6  Side = <math>5.6 \div 4</math>  = 1.4  Area of square = <math>S \times S</math>  = <math>1.4 \times 1.4</math>  = <b>1.96cm<sup>2</sup></b></p>	
33.	<p>A cinema has 280 seats.</p> <p>(a) If 65% of the seats were occupied for the first show, how many people were in the cinema?</p> <p>Answer _____ (2)</p> <p>(b) Calculate how much money the cinema collected if a ticket was sold for \$15.00.</p> <p>Answer _____ (1)</p>	<p>(a) First show = <math>65\% \times 280</math>  = <math>\frac{65}{100} \times \frac{280}{1}</math>  = <b>182 seats</b></p> <p>(b) 1 ticket = \$15  182 tickets = <math>\\$15 \times 182</math>  = <b>\$ 2730</b></p>	
34.	<p>Which shop has the best buy for rubber bands?</p> <div style="border: 1px solid black; display: inline-block; padding: 2px 10px;">SHOP A</div> = 3 for \$1.20  <div style="border: 1px solid black; display: inline-block; padding: 2px 10px;">SHOP B</div> = 5 for \$1.80  <div style="border: 1px solid black; display: inline-block; padding: 2px 10px;">SHOP C</div> = 8 for \$3.60  <p>Answer _____ (3)</p>	<p>Shop A = <math>\\$1.20 \div 3</math>  = \$0.40</p> <p>Shop B = <math>\\$1.80 \div 5</math>  = \$0.36</p> <p>Shop C = <math>\\$3.60 \div 8</math>  = \$0.45</p> <p><b>Shop B has the best buy \$0.36</b></p>	

35.	<p>Regular rate of pay per hour \$15.00. Overtime Rate = double time</p> <p>A labourer worked 6 hours per day. If he worked for 4 days and 5 hours overtime, calculate his wage.</p> <p>Answer _____ (3)</p>	<p>Normal rate = \$15 Double Time = <math>\\$15 \times 2</math> = \$30</p> <p>6 hours = 1 day 1 day = <math>\\$15 \times 6</math> = \$90 4 days = <math>\\$90 \times 4</math> = \$360 Overtime = <math>5 \times \\$30</math> = \$150 Total wage = <math>\\$360 + \\$150</math> = <b>\$510</b></p>	
36.	<p>Cubes of edge 4cm are packed into a box with dimensions 60cm x 40cm x 20cm. How many cubes are required to completely fill the box?</p> <p>Answer _____ (3)</p>	<p>No. of cubes = <math>\frac{60 \times 40 \times 20}{4 \times 4 \times 4}</math></p> <p>= <math>15 \times 10 \times 5</math> = <b>750 cubes</b></p>	

37.

Two metal posts are placed side by side as shown.



A carpenter drilled a hole at point X, 15m from the top on post A. If the length of post A is 80 m, calculate:

- (a) How far from the ground is the hole?

Answer \_\_\_\_\_ (1)

- (b) Y is a hole on post B.  
It is 25m from the top of the post but on the same level as X.

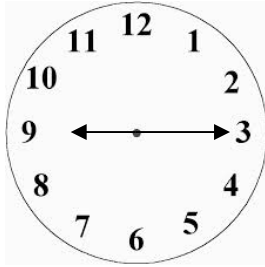
What is the length of post B?

Answer \_\_\_\_\_ (2)

$$(a) \text{ Far from ground} = 80 - 15 \\ = 65\text{m}$$

$$(b) \text{ Length of Post B} = 65 + 25 \\ = 90\text{m}$$

38.



The time on a clock is 9:15. The minute hand made one-quarter of a complete turn.

- a) To which number on the clock is the minute hand now pointing?

Answer \_\_\_\_\_ (1)

- b) State the new time?

Answer \_\_\_\_\_ (2)

(a)  $\frac{1}{4}$  turn = 3 spaces

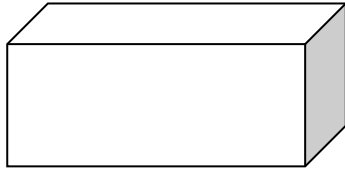
Minute hand now points to **6**

(b) **9:30**

39.

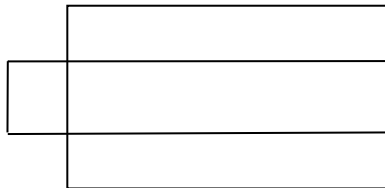
Name the solid shown below.

(a)



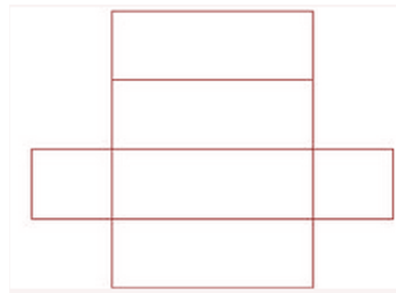
Answer \_\_\_\_\_ (1)

(b) The solid is opened to form a new shape. Complete the diagram to show the net of the solid.



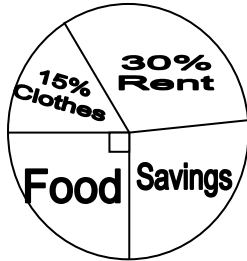
(2)

(a) **Cuboid**



40.

The pie chart shows how Marsha spends her monthly salary of \$6000.00



(a) What was Marsha's monthly savings?

Answer \_\_\_\_\_ (1)

(b) How much more money was spent on food than clothing?

Answer \_\_\_\_\_ (2)

(a) Savings

$$= 100\% - (15\% + 30\% + 25\%)$$

$$= 100\% - 70\%$$

$$= 30\%$$

$$\text{Savings} = \frac{30}{100} \times \frac{6000}{1}$$

$$= \$1800$$

(b) Food - Clothing = 25% - 15%

$$= 10\%$$

$$\frac{10}{100} \times \frac{6000}{1}$$

$$= \$600$$

### SECTION 3

**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

No .	Items	Working Column	Mark s
41.	<p>A school has 425 students. The students are seated either in two-seater or three-seater desks. There are 95 three-seater desks.</p> <p>(a) How many students were seated in the three-seater desks?</p> <p>Answer _____(1)</p> <p>(b) How many students were seated in two-seater desks?</p> <p>Answer _____ (1)</p> <p>(c) How many two-seater desks were needed for the remaining students?</p> <p>Answer _____ (3)</p>	<p>(a) 3 seaters = <math>3 \times 95</math> = <b>285</b></p> <p>(b) 2 seaters = <math>425 - 285</math> = <b>140</b></p> <p>(c) No. of 2 seaters needed = <math>140 \div 2</math> = <b>70</b></p>	

42.	<p>A school has an enrollment of 420 students. For a treat, each student was given a cake and an ice-cream. The cakes were bought in boxes of 60 and the ice-cream, in cases of 24.</p> <p>a) How many boxes of cakes were bought for the treat?</p> <p>Answer _____ (1)</p> <p>b) How many cases of ice-cream were bought?</p> <p>Answer _____ (2)</p> <p>c) The remaining ice-creams were shared equally among three students. How many additional ice-creams did each of these students get?</p> <p>Answer _____ (2)</p>	<p>(a) <math>\text{Cake} = 420 \div 60</math> = <b>7 boxes</b></p> <p>(b) <math>\text{Ice- Cream} = 420 \div 24</math> = 17.5 = <b>18 cases</b></p> <p>(c) <math>\frac{1}{2} \text{ case} = 24 \div 2</math> = 12 ice-cream No. of children = <math>12 \div 3</math> = <b>4 ice-creams</b></p>	
43.	<p>Jesse bought a laptop for \$4800.00 and sold it to Peter for \$5400.00.</p> <p>(a) Calculate Jesse's gain.</p> <p>Answer \$_____ (1)</p> <p>(b) What is Jesse's gain percent?</p> <p>Answer _____% (2)</p> <p>(c) Peter is given 10% discount. How much would the laptop now cost him?</p> <p>Answer _____ (2)</p>	<p>(a) <math>\text{Gain} = \\$5400 - \\$4800</math> = <b>\$600</b></p> <p>(b) <math>\text{Gain}\% = \frac{600}{4800} \times \frac{100}{1}</math> = <b>12.5%</b></p> <p>(c) <math>\text{Discount} = 10\%</math> <math>\text{Paid} = \\$5400 \times 90\%</math> = <b>\$4860</b></p>	

44. The table below gives the cost of some food items per kilogram.

Food Items	Cost per Kg
Turkey	\$16.00
Duck	\$50.00
Chicken	\$8.00
Goat	\$54.00

- (a) Sharon bought 6kg of turkey, 3kg of duck and a kilogram of goat.

Calculate how much money Sharon spent.

Answer \_\_\_\_\_ (2)

- (b) Complete Kimberly's spending list below if she bought some of **every** item at a total cost of \$256.00

Food Items	No. of Kg	Cost
Turkey		
Duck		
Chicken		
Goat		

(3)

$$\begin{aligned} \text{(a) 6kg turkey} &= \$16 \times 6 \\ &= \$96 \end{aligned}$$

$$\begin{aligned} \text{3kg duck} &= \$50 \times 3 \\ &= \$150 \end{aligned}$$

$$\begin{aligned} \text{1 kg goat} &= \$54 \times 1 \\ &= \$54 \end{aligned}$$

$$\begin{aligned} \text{Total} &= \$96 + \$150 + \$54 \\ &= \mathbf{\$300} \end{aligned}$$

$$\text{(b) Total} = \$256$$

$$\begin{aligned} \text{2 kg chicken} &= \$16 \\ \text{Left with} &= \$256 - \$16 \\ &= \$240 \end{aligned}$$

$$\begin{aligned} \text{2 kg Turkey} &= \$32 \\ \text{Left with} &= \$240 - \$32 \\ &= \$208 \end{aligned}$$

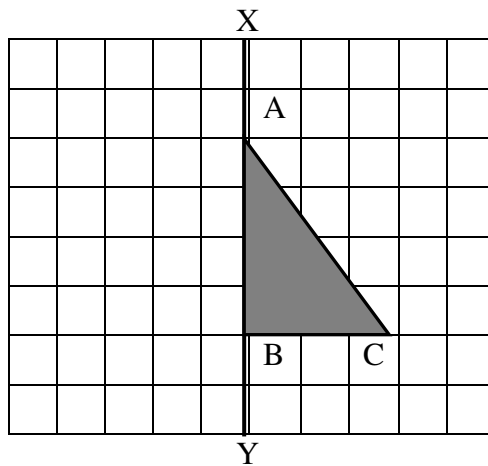
$$\begin{aligned} \text{2 kg goat} &= \$108 \\ \text{Left with} &= \$208 - \$108 \\ &= \$100 \end{aligned}$$

$$\begin{aligned} \text{2 kg duck} &= \$50 \times 2 \\ &= \$100 \end{aligned}$$

$\therefore$  Possible combination

**2 kg turkey**  
**2 kg duck**  
**2 kg chicken**  
**2 kg goat**

45.



(a) If A B is a mirror line, draw the reflection of the shaded figure.

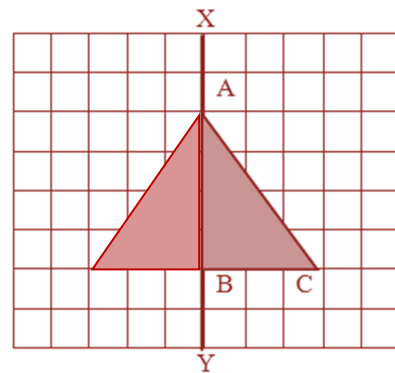
(2)

(b) Name the complete shape formed.

Answer \_\_\_\_\_ (1)

(c) If each square has an area of  $1\text{cm}^2$  calculate the area of the complete shape.

Answer \_\_\_\_\_ (2)



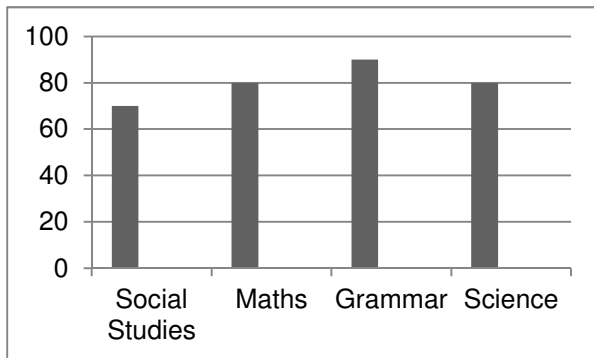
(b) **Isosceles Triangle**

(c) Area of Triangle =  $\frac{B \times H}{2}$

$$= \frac{6 \times 4}{2}$$

$$= 12\text{cm}^2$$

46. The graph below shows the marks made by a student in four subjects during a test.



- (a) In which two subjects did the student make the same mark?

Answer \_\_\_\_\_ (1)

- (b) What was the student's total mark in the four subjects?

Answer \_\_\_\_\_ (2)

- (c) What was the student's mean mark in the four subjects?

Answer \_\_\_\_\_ (2)

(a) **Math and Science**

(b)  $\text{Total} = 70 + 80 + 90 + 80$   
 $= 320$

(c)  $\text{Mean} = 320 \div 4$   
 $= 80$

**END OF TEST 17**

# TEST

# 18

# MATHEMATICS TEST 18


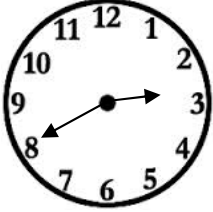
# TIME- 75 MINUTES



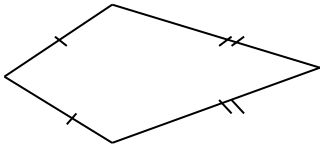
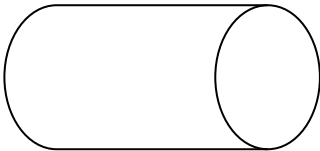
## SECTION 1

Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Mark
1.	Write three hundred and nine thousand and twenty five in numerals.  Answer _____	$  \begin{array}{r}  \text{HTh TTh Th H T O} \\  3 \quad 0 \quad 9 \quad 9 \quad 2 \quad 5  \end{array}  $	
2.	Approximate 7 630 to the nearest HUNDRED.  Answer _____	$7630 \approx 7600$ $7600$	
3.	Write the value of the underlined digit in the number 4 <u>6</u> 8 209.  Answer _____	$60\,000$	
4.	Write the number to correctly complete the expanded notation.  $346479 = (3 \times 100\,000) + (4 \times 10\,000) + (6 \times \boxed{\phantom{000}}) + (4 \times 100) + (7 \times 10) + (9 \times 1)$ Answer _____	$1\,000$	

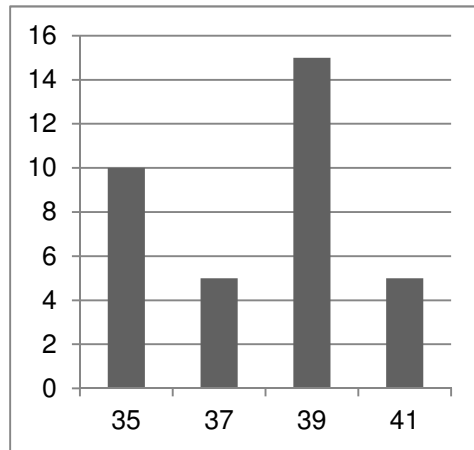
5.	<p>Order these fractions from the SMALLEST to the LARGEST.</p> <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <math>0.63</math>    ;    <math>0.36</math>    ;    <math>0.06</math> </div> <p>Answer _____</p>	<p><b>0.06    0.36    0.63</b></p>	
6.	<p>Complete the following statement:</p> <p>If <math>\frac{N}{7} = \frac{24}{28}</math>, then N =</p> <p>Answer _____</p>	<p><b><math>N = 24 \div 4</math></b> <b><math>N = 6</math></b></p>	
7.	<p>What is the remainder when 452 is divided by 3?</p> <p>Answer _____</p>	<p><b><math>452 \div 3</math></b> <b><math>= 150 \text{ r.}2</math></b></p> <p><b>Remainder = 2</b></p>	
8.	<p><math>6 \div \frac{2}{3} =</math></p> <p>Answer _____</p>	<p><b><math>\frac{6}{1} \times \frac{3}{2}</math></b> <b><math>= 9</math></b></p>	
9.	<p>Rachael ran 2.5 km. Jerome ran 1.35 km MORE than Rachael. What distance in kilometres did Jerome run?</p> <p>Answer _____ km</p>	<p><b><math>\text{Jerome} = 2.5 + 1.35</math></b> <b><math>= 3.85\text{km}</math></b></p>	
10.	<p>Jodi left home at 9:20a.m and reached the cinema 1hr and 30minutes later. At what time did Jodi arrive at the cinema?</p> <p>Answer _____</p>	<p><b><math>9 : 20 +</math></b> <b><math>1 : 30</math></b> <b><u>10:50 a.m</u></b></p>	

11.	<p>Mr. Jason bought a watch for \$295.00 and sold it for \$425.00. Calculate his profit.</p> <p>Answer _____</p>	<p><b>Profit = \$425 - \$295</b> <b>= \$130</b></p>	
12.	 <p>What is the TOTAL length of the two pieces of rods shown?</p> <p>Answer _____</p>	<p><b>Total length = <math>5\frac{1}{2} + 6\frac{2}{5}</math></b> <b>= <math>11\frac{5}{10} + \frac{4}{10}</math></b> <b>= <math>11\frac{9}{10}</math></b></p>	
13.	 <p>Write the time shown in the clock above in digital notation.</p> <p>Answer _____</p>	<p><b>2:40</b></p>	
14.	<p>Calculate the AREA of a square of side 14cm.</p> <p>Answer _____</p>	<p><b>Area of square = S x S</b> <b>= 14 x 14</b> <b>= 196cm<sup>2</sup></b></p>	

15.	<p>The perimeter of an equilateral triangle is 84cm.</p> <p>What is the length of ONE side of the triangle?</p> <p>Answer _____ cm</p>	<p>Perimeter of Triangle= 84cm</p> <p>Side = <math>84 \div 3</math></p> <p>= <b>28cm</b></p>	
16.	<p>Complete the net of the cone.</p> 		
17.	 <p>How many lines of symmetry are there in the shape shown above?</p> <p>Answer _____</p>	<p><b>1 line of symmetry</b></p>	
18.	 <p>Write the name of the solid shown above.</p> <p>Answer _____</p>	<p><b>CYLINDER</b></p>	

19.

The bar graph below shows the height of ochro plants.



Height of plants in cm

How many plants are taller than 37cm?

Answer \_\_\_\_\_

$$15 + 5 = 21$$

20.

The pictograph shows the favourite sports played by children in a class.

Sport	No. of Children
Football	8 smiley faces
Cricket	5 smiley faces
Volleyball	4 smiley faces

If there are 32 children in this class, what number does each smiley face represent?

Answer \_\_\_\_\_

$$16 \text{ smiley faces} = 32$$

$$1 \text{ smiley face} = 32 \div 16$$

$$1 \text{ smiley face} = 2 \text{ children}$$

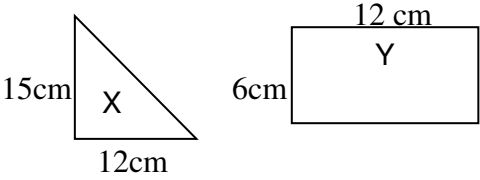
## SECTION 2

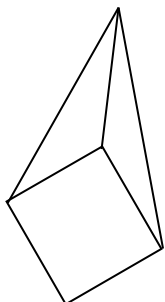
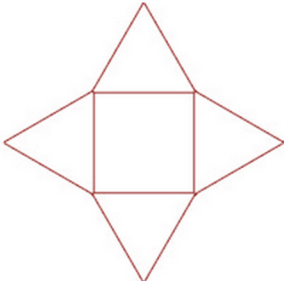
**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Mark
21.	Subtract 4632 from 6975  Answer _____ (2)	<b>2343</b>	
22.	If $\frac{2}{3}$ of Marlon's money is \$60.00, calculate the total amount of money Marlon has.  Answer _____ (2)	$\frac{2}{3} = \$60$ $1 = \frac{60}{1} \times \frac{3}{2}$ $= \$90$	
23.	Multiply $4\frac{1}{2}$ by $3\frac{1}{3}$  Answer _____ (2)	$4\frac{1}{2} \times 3\frac{1}{3}$ $= \frac{9}{2} \times \frac{10}{3}$ $= 15$	
24.	For every 5 adults present at a family treat, there were 12 children. If there were 30 adults present, how many children were there?  Answer _____ (2)	$5 \text{ adults} = 12 \text{ children}$ $1 \text{ adult} = \frac{12}{5}$ $30 \text{ adults} = \frac{12}{5} \times \frac{30}{1}$ $= 72 \text{ children}$	
25.	$\frac{5}{8}$ m of cloth is used to make a vest. How many metres of cloth are needed to make 12 similar vests?  Answer _____ (2)	$1 \text{ vest} = \frac{5}{8}$ $12 \text{ vests} = \frac{5}{8} \times \frac{12}{1}$ $= 7.5 \text{ m}$	

26.	<p>From a piece of cloth 12m long, Sally used 4.5m to make a dress, 2.8m to make a skirt and the rest to make a suit. Calculate how much cloth she used to make a suit.</p> <p>Answer _____ (3)</p>	$\begin{aligned}\text{Suit} &= 12 - (4.5 + 2.8) \\ &= 12 - 7.3 \\ &= \mathbf{4.7m}\end{aligned}$	
27.	<p>65% of a class was present on Friday. If there were 7 children absent, how many children were there in the class altogether?</p> <p>Answer _____ (3)</p>	$\begin{aligned}\text{Present} &= 65\% & \text{Absent} &= 35\% \\ \text{Absent} &= \frac{35}{100} \text{ or } \frac{7}{20} \\ \frac{7}{20} &= 7 \\ 1 &= \frac{7}{1} \times \frac{20}{7} \\ &= \mathbf{20 \text{ students}}\end{aligned}$	
28.	<p>A survey showed that in a group of 25 people, 8 people liked red, 12 liked green and the rest liked blue.</p> <p>What percent of the people liked blue?</p> <p>Answer _____ (2)</p>	$\begin{aligned}\text{Blue} &= 25 - (8 + 12) \\ &= 25 - 20 \\ &= 5 \\ \text{Percent liked blue} &= \frac{5}{25} \times \frac{100}{1} \\ &= \mathbf{20\%}\end{aligned}$	

29.	<p>The opposite faces of a die are painted in green, white and black. When thrown, points are awarded as follows:</p> <table><tr><th>COLOURS</th><th>POINTS</th></tr><tr><td>Green</td><td>5</td></tr><tr><td>White</td><td>10</td></tr><tr><td>Black</td><td>15</td></tr></table> <p>Tom made three throws and got white twice and black once. How many points did he score?</p> <p>Answer _____ (1)</p> <p>Jerry scored 70 points. Complete the table below to show how many times Jerry threw the colour WHITE.</p> <table><tr><th>COLOURS</th><th>NO. OF THROWS</th></tr><tr><td>Green</td><td>1</td></tr><tr><td>White</td><td></td></tr><tr><td>Black</td><td>3</td></tr></table> <p>(2)</p>	COLOURS	POINTS	Green	5	White	10	Black	15	COLOURS	NO. OF THROWS	Green	1	White		Black	3	<p>Tom = (2 x 10) + (1 x 15) = 20 + 15 = <b>35 points</b></p> <table><tr><th>COLOURS</th><th>NO. OF THROWS</th></tr><tr><td>Green</td><td>1</td></tr><tr><td>White</td><td></td></tr><tr><td>Black</td><td>3</td></tr></table> <p>Jerry = 70 1 green = 1 x 5 = 5 3 black = 3 x 15 = 45</p> <p>White Points = 70 – ( 5 + 45) = 70 – 50 = 20 White Throws = 20 ÷ 10 = <b>2 throws</b></p>	COLOURS	NO. OF THROWS	Green	1	White		Black	3	
COLOURS	POINTS																										
Green	5																										
White	10																										
Black	15																										
COLOURS	NO. OF THROWS																										
Green	1																										
White																											
Black	3																										
COLOURS	NO. OF THROWS																										
Green	1																										
White																											
Black	3																										
30.	<p>Larry earns \$120.00 per day. He spends <math>\frac{1}{4}</math> of his money on lunch.</p> <p>(a) How much does his lunch cost?</p> <p>Answer _____ (1)</p> <p>(b) Calculate how much change Larry remains with after buying lunch.</p>	<p>(a) Lunch = <math>\frac{1}{4} \times \frac{120}{1}</math> = <b>\$ 30</b></p> <p>(b) Change = \$ 120 - \$30 = <b>\$90</b></p>																									

	<p>Answer _____ (2)</p>		
31.	<p>Below are diagrams of triangle X and rectangle Y.</p>  <p>Which figure has the GREATER area?</p> <p>Answer _____ (3)</p>	<p>Area of triangle = <math>\frac{B \times H}{2}</math>  <math>= \frac{15 \times 12}{2}</math>  <math>= 90\text{cm}^2</math></p> <p>Area of rect. = <math>L \times W</math>  <math>= 12 \times 6</math>  <math>= 72\text{cm}^2</math></p> <p><b><math>\therefore</math> Figure X has the greater area</b></p>	
32.	<p>A father is three times as heavy as his son. If together they weigh 96kg, how heavy is the father?</p> <p>Answer _____ (2)</p>	<p>Son = X      Father = 3X  Father and Son = 4X  <math>4X = 96\text{kg}</math>  <math>X = 96 \div 4</math>  <math>= 24</math>  Father = <math>24 \times 3</math>  <math>= 72\text{kg}</math></p>	
33.	<p>A bus arrived in Arima at 8:07a.m. It took 15 minutes for the passengers to get on and 48 minutes to get to Sangre Grande.</p> <p>(a) At what time did the bus get to Sangre Grande?</p> <p>Answer _____ (2)</p> <p>(b) If the bus returned to Arima at 10:55a.m, how long did the bus</p>	<p>(a) Time taken  <math>= 8:07 + (15 + 48)</math>  <math>= 8:07 + 1:03</math>  <math>= 9:10 \text{ am}</math></p> <p>(b) Return = <math>10:55 - 9:10</math>  <math>= 1\text{hr } 45 \text{ minutes}</math></p>	

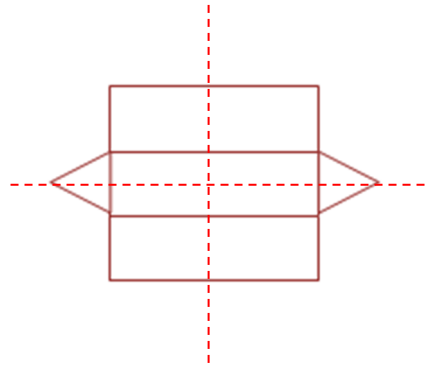
	<p>take to return?</p> <p>Answer _____ (1)</p>		
34.	<p>Calculate the AMOUNT to be repaid on a loan of \$5000.00 for 5 years at <math>12\frac{1}{2}\%</math> per annum.</p> <p>Answer \$ _____ (3)</p>	$S.I = \frac{P \times R \times T}{100}$ $= \frac{5000 \times 5 \times 25}{100 \times 2}$ $= \$3125$ $\text{Amount} = \$5000 + \$3125$ $= \text{\$ 8125}$	
35.	<div style="border: 1px solid black; border-radius: 15px; padding: 10px; margin: 10px;"> <p><b>CHARLIE'S CHAIR RENTAL</b></p> <p>Plastic Chairs – \$2.00 per chair</p> <p>Chrome Chairs - \$3.00 per chair</p> </div> <p>A school rented 150 plastic chairs and 25 chrome chairs for graduation. Calculate how much money the school would have to pay for the rental of ALL the chairs.</p> <p>Answer _____ (3)</p>	$\text{Total} = (150 \times 2) + (25 \times 3)$ $= \$300 + \$75$ $= \text{\$375}$	
36.	<p>Draw the net of the solid shown.</p> 		

		(2)	
37.	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p style="text-align: center;"><b>MANGOES</b></p> <p style="text-align: center;"><b>4 FOR \$10.00</b></p> </div> <p>(a) How much would mother pay for 1 DOZEN mangoes?</p> <p>Answer _____</p> <p>(1)</p> <p>(b) How many mangoes can mother buy with \$45.00?</p> <p>Answer _____</p> <p>(2)</p>	<p>(a) 4 mangoes = \$10  1 mango = <math>\frac{10}{4}</math>  12 mangoes = <math>\frac{10}{4} \times \frac{12}{1}</math>  = <b>\$30</b></p> <p>(b) \$10 = 4 mangoes  \$5 = 2 mangoes  \$40 = 4 x 4  = 16 mangoes  \$45 = 16 + 2  = <b>18 mangoes</b></p>	
38.	<p>Paul is making tickets for a fundraiser using bristol board. The size of each ticket is 20cm by 15cm.</p> <p>How many tickets can Paul get from a larger sheet of Bristol board of length 2m and width 1.5m?</p> <p>Answer _____ (3)</p>	<p><b>Bristol Board = 2m x 1.5m</b>  = 200cm x 150cm  <b>Tickets = 20cm x 15cm</b></p> <p><b>No. of tickets = <math>\frac{200 \times 150}{20 \times 15}</math></b>  = <b>100cm</b></p>	

39. Draw in the line(s) of symmetry on the net of the figure shown below.



(2)



40. The incomplete tally chart shows the favourite toys of Standard One pupils.

TOYS	TALLY	FREQUENCY
Transformers		
Lego Blocks		8
Play Doh		19

If there are 40 pupils in Standard One complete the tally and frequency chart above.

Answer \_\_\_\_\_ (2)

TOYS	TALLY	FREQUENCY
Transformers		
Lego Blocks		8
Play Doh		19

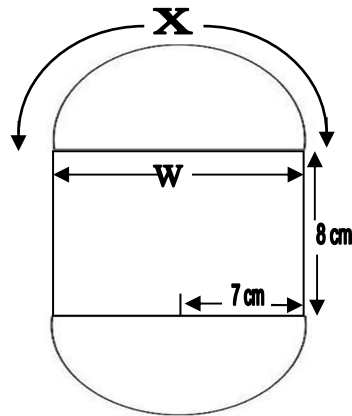
### SECTION 3

**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

41.	<p>In a school-show for 65 students, <math>\frac{4}{5}</math> of the students attended.</p> <p>(a) How many students attended the show?</p> <p>Answer: _____(2)</p> <p>(b) How many students did not attend the show?</p> <p>Answer: _____(1)</p> <p>(c) If there were 4 teachers who attended the show, calculate the fraction of the viewing population that was made up of teachers.</p> <p>Answer: _____(2)</p>	<p>(a) <math>\text{Attended} = \frac{4}{5} \times \frac{65}{1}</math></p> <p style="text-align: center;"><b>= 52 students</b></p> <p>(b) <math>\text{Did not attend} = 65 - 52</math></p> <p style="text-align: center;"><b>= 13 students</b></p> <p>(c) <math>\frac{4}{56} = \frac{1}{14}</math></p>	
42.	<p>There are 240 guavas in a box. Jack got <math>\frac{3}{10}</math> of the guavas, Jill got <math>\frac{1}{4}</math> and Sam took the rest.</p> <p>(a) How many more guavas Jack received than Jill?</p> <p>Answer: _____(2)</p> <p>(b) Calculate the number of guavas Sam got.</p> <p>Answer: _____(2)</p> <p>(c) Sam sold 40 of his guavas. How many guavas does Sam now have?</p> <p>Answer: _____(1)</p>	<p>(a) <math>\text{Jill} = \frac{1}{4} \times \frac{240}{1}</math></p> <p style="text-align: center;"><b>= 60 guavas</b></p> <p><math>\text{Jack} = \frac{3}{10} \times \frac{240}{1}</math></p> <p style="text-align: center;"><b>= 72 guavas</b></p> <p><math>\text{Difference} = 72 - 60</math></p> <p style="text-align: center;"><b>= 12 guavas</b></p> <p>(b) <math>\text{Sam} = 240 - (60 + 72)</math></p> <p style="text-align: center;"><b>= 240 - 132</b></p> <p style="text-align: center;"><b>= 108 guavas</b></p> <p>(c) <math>\text{Sam} = 108 - 40</math></p> <p style="text-align: center;"><b>= 68 guavas</b></p>	

43.

Two semi-circles and a rectangle are joined together as shown.



Use the information from the diagram to calculate the following:

(a) the value of **W**.

Answer: \_\_\_\_\_(1)

(b) the length of the curved part labeled **X**.

Answer: \_\_\_\_\_(2)

(c) the perimeter of the shape.

Answer: \_\_\_\_\_(2)

$$(a) \ W = 7 \times 2 \\ = 14\text{cm}$$

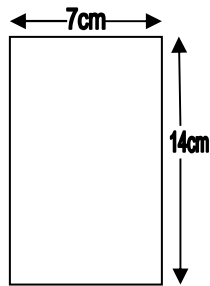
$$(b) \ \text{Circumference} = D \times \pi \\ = \frac{14}{1} \times \frac{22}{7} \\ = 44\text{cm} \\ X = 44 \div 2 \\ X = 22\text{cm}$$

$$(c) \ \text{Perimeter of shape} \\ = 44 + 8 + 8 \\ = 60\text{cm}$$

44.	<p>A DVD club charges an overdue fee of \$2 per night per movie. Ryan paid overdue fees of \$32 for returning 4 DVD movies late.</p> <p>(a) How many nights were the movies late?</p> <p>Answer: _____(3)</p> <p>(b) How many movies Ryan rented if he paid \$30 in overdue fees for 3 nights?</p> <p>Answer: _____(2)</p>	<p>(a) 4 DVD's = \$32  1 DVD = <math>\\$32 \div 4</math>  = \$8  \$2 = 1 night overdue  \$8 = 1 x 4  = <b>4 nights overdue</b></p> <p>(b) 1 night = \$2  3 nights = <math>\\$2 \times 3</math>  = \$6  \$6 = 1 movie overdue  \$30 = <b>5 movies overdue</b></p>	
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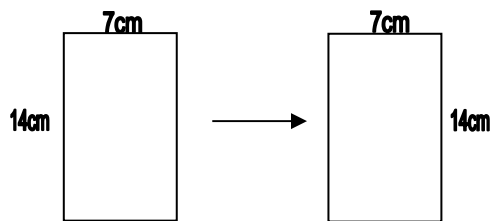
45.

- (a) Calculate the perimeter of the rectangle shown.



Answer: \_\_\_\_\_(1)

- (b) This rectangle is moved to join another similar rectangle (along their lengths).



Name the combined shape formed.

Answer: \_\_\_\_\_(2)

- (c) Calculate the perimeter of the combined shape.

Answer: \_\_\_\_\_(2)

- (d) How many lines of symmetry are there in the combined shape?

Answer: \_\_\_\_\_(1)

$$\begin{aligned} \text{(a) Perimeter} &= 2L + 2W \\ &= (2 \times 14) + (2 \times 7) \\ &= 28 + 14 \\ &= \mathbf{42\text{cm}} \end{aligned}$$














**(b) Square**

$$\begin{aligned} \text{(c) Perimeter of square} &= S \times 4 \\ &= 14 \times 4 \\ &= \mathbf{56\text{cm}} \end{aligned}$$

**(d) 4 lines of symmetry**

46.

The pictograph below shows the population of four schools.

POPULATION OF FOUR SCHOOLS	
School A	  
School B	    
School C	 
School D	  

 = 50 pupils.

(a) What is the population of school C?

Answer: \_\_\_\_\_(1)

(b) How many more pupils attended school B than school A?

Answer: \_\_\_\_\_(1)

(c) What is the total population of the four schools?

Answer: \_\_\_\_\_(1)

(d) What fraction of all the pupils attend school A?

Answer: \_\_\_\_\_(2)

$$(a) 2 \times \text{smiley face} = 2 \times 50 = 100 \text{ pupils}$$

$$(b) 2 \times \text{smiley face} = 2 \times 50 = 100 \text{ pupils more}$$

$$(c) \text{Total Population} = 13 \times \text{smiley face} = 650 \text{ pupils}$$

$$(d) \frac{150}{650} = \frac{3}{13}$$

END OF TEST 18

# TEST

# 19

# MATHEMATICS TEST 19



# TIME- 75 MINUTES

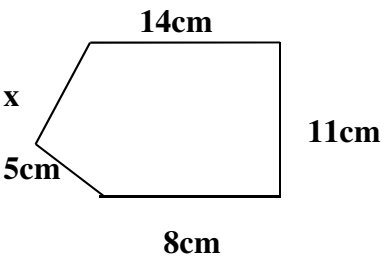
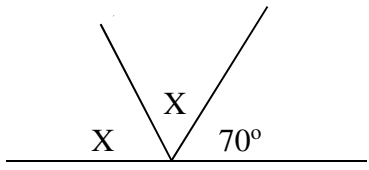
## SECTION 1

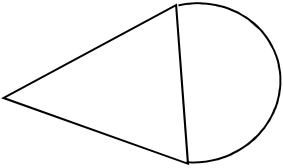
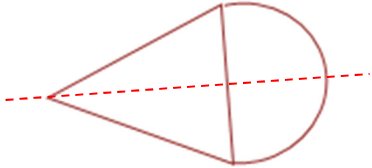
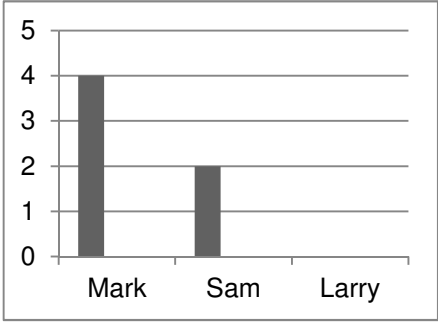
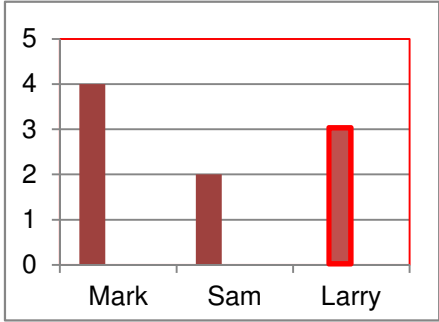
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Marks
1.	Write 25 041 in words.  Answer _____	<b>Twenty-five thousand and forty one.</b>	
2.	$\begin{array}{r} 4009 \\ - 2506 \\ \hline \\ \hline \end{array}$ Answer _____	<b>1503</b>	
3.	Estimate 9.42 to the nearest TENTH.  Answer _____	<b>9.40</b>	
4.	A cupboard has 6 shelves. How many shelves are there in 18 cupboards?  Answer _____	<b>1 cupboard = 6 shelves</b> <b>18 cupboards = 6 x 18</b> <b>= 108 shelves</b>	
5.	Arrange the fractions below from largest to smallest.  $\frac{1}{6}$ $\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{3}$  Answer _____, _____, _____, _____	$\begin{array}{cccc} \frac{1}{6} & \frac{1}{2} & \frac{1}{4} & \frac{1}{3} \\ \hline 2 & 6 & 3 & 4 \\ \hline & 12 & & \end{array}$ $\frac{1}{2} \quad \frac{1}{3} \quad \frac{1}{4} \quad \frac{1}{6}$	
6.	A child's picture book contains 16 pages. $\frac{3}{4}$ of the pages have been read. How many pages have been read?  Answer _____	<b>Book = 16pages</b> <b>Read = <math>\frac{3}{4} \times \frac{16}{1}</math></b>  <b>= 12 pages</b>	

7.	<p>Convert 0.65 to a fraction in its LOWEST terms.</p> <p>Answer _____</p>	$0.65 = \frac{65}{100}$ $= \frac{13}{20}$	
8.	<p>A ribbon is 4.6m long. If 2.9m is cut, what length of ribbon remained?</p> <p>Answer _____</p>	$\begin{array}{r} 4.6 - \\ \underline{2.9} \\ 1.7 \text{ m} \end{array}$	
9.	<p>How many 5¢ coins equal \$7.25?</p> <p>Answer _____</p>	$\begin{array}{l} \$1 = 20 \\ \$7.25 = 20 \times \$7.25 \\ = 145 \text{—} 5\text{c coins} \end{array}$	
10.	<p>A discount of \$75.00 is given off a jacket worth \$320.00. How much does the jacket cost after the discount?</p> <p>Answer _____</p>		

11.	<p>Mr. Brown left home at quarter to six. Draw in the hands on the clock to show the time he left home.</p> 		
12.	<p>VAT of 15% is charged on a bicycle priced at \$360.00. How much is the VAT?</p> <p>Answer _____</p>	$\text{VAT} = \frac{15}{100} \times \frac{360}{1}$ $= \$54$	
13.	<p>A rectangle has a length of 14cm. Its width is HALF as long.</p> <p>What is the distance around the rectangle?</p> <p>Answer _____</p>	$L = 14\text{cm} \quad W = 7\text{cm}$ $\begin{aligned} \text{Perimeter} &= 2L + 2W \\ &= (2 \times 14) + (2 \times 7) \\ &= 28 + 14 \\ &= 42\text{cm} \end{aligned}$	
14.	<p>Kavita begins her dance class at 8:30 am. She arrives a quarter of an hour BEFORE the start of the class. What time did she arrive?</p> <p>Answer _____</p>	$8:30 - 0:15 = 8:15 \text{ am}$	

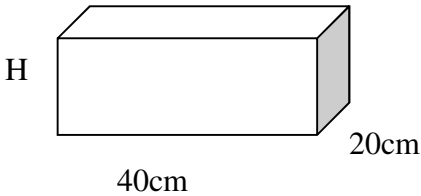
15.	<p>The shape shown has a perimeter of 50cm.</p>  <p>Find the length of side x?</p> <p>Answer _____</p>	<p>Perimeter of shape = 50cm</p> <p>Side x = <math>50 - (14 + 11 + 8 + 5)</math>  <math>= 50 - 38</math>  <math>= 12\text{cm}</math></p>	
16.	<p>A compass pointer moves from North to South East in a clockwise direction. Through how many degrees did it turn?</p> <p>Answer _____</p>	<p><math>N \rightarrow SE = 90^0 + 45^0</math>  <math>= 135^0</math></p>	
17.	<p>Calculate the value of angle x below.</p>  <p>Answer _____ degrees.</p>	<p><math>2X = 180^0 - 70^0</math>  <math>2X = 110^0</math>  <math>X = 55^0</math></p>	
18.	<p>The following points were obtained in a game of darts  20, 60, 80, 20, 60, 10, 40 .</p> <p>What is the MODAL point scored?</p>	<p><b>20</b></p>	

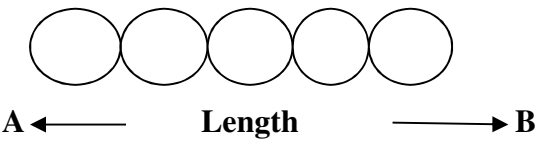
19.	<p>Answer _____</p> <p>Draw ALL lines of symmetry on the shape below.</p> 		
20.	<p>The incomplete bar chart shows the number of fishes caught by 3 boys.</p>  <p>Together the boys caught 9 fishes. Complete the graph to show the number of fishes Larry caught.</p> <p>Answer _____</p>		

## SECTION 2

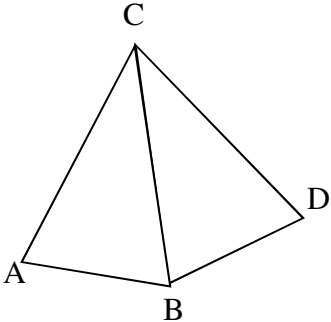
Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Marks
21.	$15\frac{3}{4} \div 2\frac{1}{4}$  Answer _____ (2)	$15\frac{3}{4} \div 2\frac{1}{4}$ $\frac{63}{4} \div \frac{9}{4}$ $\frac{63}{4} \times \frac{4}{9}$ $= 7$	
22.	$\frac{3}{7}$ of a class is absent. There are 24 children present. How many children are in the class?  Answer _____ (2)	$\frac{3}{7} = \text{absent}$ $\frac{4}{7} = \text{present}$  $\frac{4}{7} = 24$ $1 = \frac{24}{1} \times \frac{7}{4}$ $= 42 \text{ students}$	
23.	A newspaper stand has twice as many daily newspapers as weekly ones. There are 42 newspapers in all. How many DAILY newspapers are there at the stand?  Answer _____ (2)	$42 \div 3 = 14$  $\text{Daily} = 14 \times 2$ $= 28$ $\text{Weekly} = 14$	
24.	(a) Write in the correct sign, either $>$ or $<$ , to complete the statement below.  $\frac{3}{5} \quad \square \quad \frac{3}{8} \quad (1)$  (b) Calculate the difference between $\frac{3}{5}$ and $\frac{3}{8}$  Answer _____ (2)	$\frac{3}{5} > \frac{3}{8}$  $\frac{3}{5} - \frac{3}{8}$ $\frac{24 - 15}{40}$ $= \frac{9}{40}$	

25.	<p><math>\frac{4}{5}</math> of the number of pens in a pack is 60. Calculate how many more pens are needed to fill the pack.</p> <p>Answer _____ (3)</p>	$\frac{4}{5} = 60$ $1 = \frac{60}{1} \times \frac{5}{4}$ $= 75$ $75 - 60 = \mathbf{15 \text{ pens needed}}$	
26.	<p>Complete the number pattern below.</p> <p>(a) <math>\frac{1}{2}</math>, <math>\frac{2}{6}</math>, _____, <math>\frac{8}{54}</math>.</p> <p>Answer _____ (2)</p> <p>(b) What is the fifth fraction in the pattern?</p> <p>Answer _____ (1)</p>	<p>(a) <math>\frac{2}{6} \times \frac{2}{3} = \frac{4}{18}</math></p> <p>(b) Fifth pattern = <math>\frac{8}{54} \times \frac{2}{3}</math>  <math>= \frac{16}{162}</math></p>	
27.	<p>A large block of ice has a volume of 12,000 cm<sup>3</sup>.</p> <div style="text-align: center;">  </div> <p>(a) What is its height?</p> <p>Answer _____ (1)</p> <p>(b) What is the AREA of the Shaded face of the block of ice?</p> <p>Answer _____ (2)</p>	<p>(a) <math>H = \frac{\text{Volume}}{L \times W}</math>  <math>H = \frac{12000}{40 \times 20}</math>  <math>H = \frac{12000}{800}</math>  <math>H = \mathbf{15cm}</math></p> <p>(b) <math>\text{Area} = L \times W</math>  <math>= 20 \times 15</math>  <math>= \mathbf{300cm^2}</math></p>	

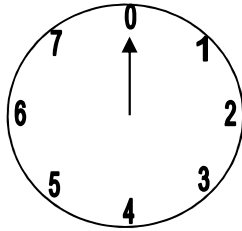
28.	<p>What is the smallest number when divided by 6, 8 and 12 will always leave a remainder of 3?</p> <p>Answer _____ (2)</p>	<p>6 – 6, 12, 18, 24, 30, 36 8 – 8, 16, 24, 32, 40, 48 12 – 12, 24, 36, 48, 60</p> <p>H.C.F = 24 24 + 3 = <b>27</b></p>	
29.	<p>A shirt was sold at a loss of <math>12\frac{1}{2}\%</math> for \$42.00. Calculate the cost price of the shirt.</p> <p>Answer _____ (3)</p>	<p>Cost Price = 100% S.P = 100% - 12.5% = 87.5% or <math>\frac{7}{8}</math> <math>\frac{7}{8} = 42</math> <math>1 = \frac{42}{1} \times \frac{8}{7}</math> = <b>\$48</b></p>	
30.	<p>Each circle in the pattern below is made from 44cm of wire.</p>  <p>A ←                      Length                      → B</p> <p>(a) Calculate the diameter of ONE of the circles.</p> <p>Answer _____ (2)</p> <p>(b) If one more circle was added, what will be the length of the new pattern from point A to B?</p> <p>Answer _____ (1)</p>	<p>(a) Circumference = 44cm</p> <p>Diameter = <math>C \div \pi</math> = <math>44 \div \frac{22}{7}</math> = <math>\frac{44}{1} \times \frac{7}{22}</math> = <b>14cm</b></p> <p>(b) 6 x 14 = <b>84cm</b></p>	

31.	<p>Complete the bill below for school supplies.</p> <table><tr><th>Items</th><th>Unit Cost</th><th>Cost</th></tr><tr><td>1 textbook</td><td>\$82.00</td><td>\$82.00</td></tr><tr><td>4 notebooks</td><td>\$9.50</td><td>\$</td></tr><tr><td>5 pencils</td><td>\$2.00</td><td>\$10.00</td></tr><tr><td>Total Cost before VAT</td><td></td><td>\$130.00</td></tr></table> <p>(b)VAT @ 15% \$_____</p> <p>(c) Final bill (with VAT) \$_____ (3)</p>	Items	Unit Cost	Cost	1 textbook	\$82.00	\$82.00	4 notebooks	\$9.50	\$	5 pencils	\$2.00	\$10.00	Total Cost before VAT		\$130.00	<p>(a) 4 notebooks = \$130 – (\$82 + \$10) = \$130 - \$92 = <b>\$38</b></p> <p>(b) <math>VAT = \frac{15}{100} \times \frac{130}{100}</math> = <b>\$ 19.50</b></p> <p>(c) Final Bill  = \$130 + \$19.50 = <b>\$149.50</b></p>	
Items	Unit Cost	Cost																
1 textbook	\$82.00	\$82.00																
4 notebooks	\$9.50	\$																
5 pencils	\$2.00	\$10.00																
Total Cost before VAT		\$130.00																
32.	<p>Carol, Ann and Faraz were given a total of \$56.00. Faraz has \$5.00 more than Carol and Carol has \$3.00 more than Ann.</p> <p>Calculate how much money each child was given.</p> <p>Answer: Carol _____</p> <p>Ann _____</p> <p>Faraz _____ (3)</p>	<p>Ann = x Carol = x + 3 Faraz = x + 8 (5 + 3)</p> <p><math>x + x + x + 3 + 8 = \\$56</math> <math>3x + 11 = \\$56</math> <math>3x = \\$56 - 11</math> <math>3x = \\$45</math> <math>x = \\$45 \div 3</math> <math>x = \\$15</math></p> <p><b>Carol = \$18 (\$15 +\$3)</b> <b>Ann = \$15</b> <b>Faraz = \$23 (\$15 + \$8)</b></p>																

33.	<p>The diagram below is made up of two similar isosceles triangles. Line AB is 8cm and line AC is 10cm.</p>  <p>What is the perimeter of the combined shape?</p> <p>Answer _____ (2)</p>	<p>Perimeter  <math>= (8 \times 2) + (10 \times 2)</math>  <math>= 16 + 20</math>  <math>= \mathbf{36cm}</math></p>	
34.	<p>The cost of an adult ticket for a cinema show is \$50.00. A ticket for a child costs HALF price. What is the total cost for 12 adults and 7 children's tickets?</p> <p>Answer _____ (3)</p>	<p>Adult = \$50   Child = \$25</p> <p>12 adults + 7 children  <math>= (12 \times 50) + (7 \times 25)</math>  <math>= \\$600 + \\$175</math>  <math>= \mathbf{\\$775}</math></p>	
35.	<p>For every 6m<sup>2</sup> of a wall that Thomas paints, Barney paints 4m<sup>2</sup>. Barney eventually paints 56m<sup>2</sup> of the wall. Calculate the area of wall painted by Thomas.</p> <p>Answer _____ (2)</p>	<p>Barney = 4m<sup>2</sup>  Thomas = 6m<sup>2</sup></p> <p>Barney = 56m<sup>2</sup>  Thomas = <math>(56 \div 4) \times 6</math>  <math>= 14 \times 6</math>  <math>= \mathbf{84m^2}</math></p>	

36.

The diagram shows the meter for a car engine.



- (a) Through what FRACTION must the needle move to point 1?

Answer \_\_\_\_\_ (1)

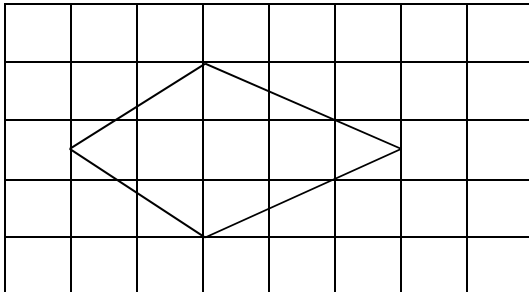
- (b) At what number will the needle stop to complete a  $225^\circ$  clockwise turn?

Answer \_\_\_\_\_ (1)

$$\begin{aligned} \text{(a) } 8 \text{ spaces} &= 360^\circ \\ 1 \text{ space} &= 360^\circ \div 8 \\ &= 45^\circ \end{aligned}$$

$$\text{(b) } 225^\circ \div 45^\circ = 5$$

37.



- (a) Name the shape drawn on the grid.

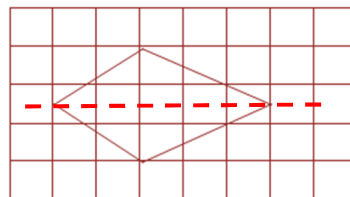
Answer \_\_\_\_\_ (1)

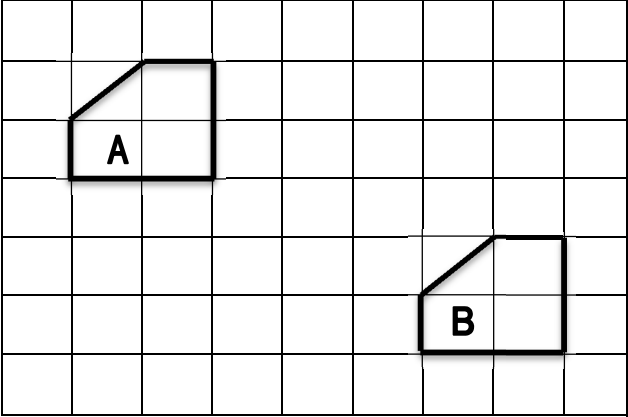
- (b) Draw one line of symmetry on the shape above.

(1)

- (a) **Kite**

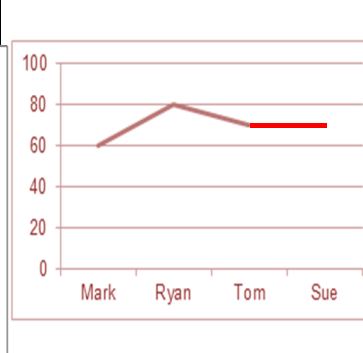
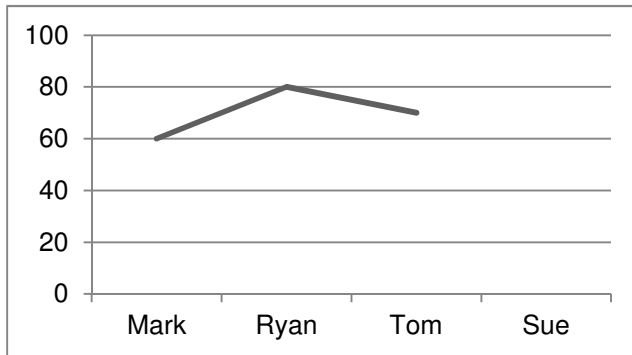
- (b)



38.	<p>The shape below has moved from position A to B.</p>  <p>(a) Name the movement.</p> <p>Answer _____ (1)</p> <p>(b) Describe the movement completely.</p> <p>Answer _____</p> <p>_____</p> <p>_____ (2)</p>	<p>(a) Slide / Translation</p> <p>(b) Shape A slid 5 units right and 3 units down</p>	
39.	<p>Randy used the faces of solid shapes to make plane shape prints.</p> <p>Name 2 solids that will give him circular prints.</p> <p>Answer _____</p> <p>_____ (2)</p>	<p>Cylinder</p> <p>Cone</p>	

40.

The incomplete line graph shows the times children spend on homework.



A total of 280 minutes was spent on homework.  
Complete the line graph above for Sue.

(2)

$$\begin{aligned}
 &\text{Sue} \\
 &= 280 - (60 + 80 + 70) \\
 &= 280 - 210 \\
 &= \mathbf{70 \text{ minutes}}
 \end{aligned}$$

### SECTION 3

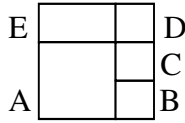
**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
41.	<p>Samantha was required to calculate the product of 75 and 17. Instead she multiplied: 75 by 19</p> <p>(a) What was Samantha's incorrect product?</p> <p>Answer _____ (1)</p> <p>(b) By how much was Samantha's product MORE than the CORRECT answer?</p> <p>Answer _____ (2)</p> <p>(c) Write the missing number to complete the number statement below to get the CORRECT answer for 75 by 17.</p> <p>(75 x _____) + (75 x 7)</p> <p style="text-align: right;">(1)</p> <p>(d) Write in the missing SIGN in the box below that Samantha could have used to correct her error.</p> <p>( 75 x 19) <input type="text"/> (75 x 2)</p> <p style="text-align: right;">(1)</p>	<p>(a) <math>75 \times 19 = 750 + 675</math> <math>= 1425</math></p> <p>(b) <math>75 \times 17 = 750 + 525</math> <math>= 1275</math> Difference = <math>1425 - 1275</math> <math>= 150</math></p> <p>(c) <math>75 \times 10</math></p> <p>(d) <input type="text"/> = -</p>	

42.	<p>Kelly sold 60% of her plums and gave her father 15% of the remainder.</p> <p>Kelly remained with 68 plums.</p> <p>(a) Calculate how many plums Kelly had at the beginning.</p> <p>Answer: _____ plums (3)</p> <p>(b) How many more plums did Kelly sell than her father received?</p> <p>Answer: _____ plums (2)</p>	<p>(a) Sold = 65% Remainder = 40%</p> <p>Father = 15% of 40%</p> <p>Kept = 85% x 40%</p> <p style="padding-left: 40px;">= 0.85 x .4</p> <p style="padding-left: 40px;">= 0.34 or <math>\frac{17}{50}</math></p> <p><math>\frac{17}{50} = 68</math></p> <p><math>1 = \frac{68}{1} \times \frac{50}{17}</math></p> <p style="padding-left: 40px;">= <b>200 plums</b></p> <p>(b) Sold = 200 x 0.6</p> <p style="padding-left: 40px;">= 120</p> <p>Father = <math>\frac{15}{100} \times \frac{80}{1}</math></p> <p style="padding-left: 40px;">= 12</p> <p>Difference = 120 – 12</p> <p style="padding-left: 40px;">= <b>108 plums</b></p>	
43.	<p>Mr. Harris took a loan of \$16000.00 for 2 years at a rate of 10% per annum.</p> <p>(a) Calculate his interest.</p> <p>Answer: _____ (1)</p> <p>(b) Calculate the amount to repay.</p> <p>Answer: _____ (2)</p> <p>(c) The amount is repaid in EQUAL MONTHLY instalments. What would be the value of EACH instalment?</p> <p>Answer: _____ (2)</p>	<p>(a) <math>S.I = \frac{P \times R \times T}{100}</math></p> <p style="padding-left: 40px;">= <math>\frac{16000 \times 10 \times 2}{100}</math></p> <p style="padding-left: 40px;">= <b>\$3200</b></p> <p>(b) Amount = \$16000 + \$3200</p> <p style="padding-left: 40px;">= <b>\$ 19 200</b></p> <p>(c) Mthly Instalment</p> <p style="padding-left: 40px;">= \$19200 ÷ 24</p> <p style="padding-left: 40px;">= <b>\$ 800</b></p>	

<p>44.</p>	<p>A café stocks 600 cups. <math>62\frac{1}{2}\%</math> of it is used to serve juice and the rest for tea.</p> <p>(a) How many cups were used to serve juice?</p> <p>Answer: _____ (1)</p> <p>(b) How many cups were used to serve tea?</p> <p>Answer: _____ (1)</p> <p>(c) The cups were bought in sets of 10 for \$32.00. Calculate the cost of purchasing 150 juice cups and 50 tea cups.</p> <p>Answer: _____ (3)</p>	<p>(a) Served Juice = <math>62.5\% \times 600</math>  <math>= \frac{5}{8} \times \frac{600}{1}</math>  <math>= 75 \times 5</math>  <math>= \mathbf{375 \text{ cups}}</math></p> <p>(b) Tea = <math>600 - 375</math>  <math>= \mathbf{225 \text{ cups}}</math></p> <p>(c) Total = <math>150 + 50</math>  <math>= 200</math>  Cost = <math>200 \div 10</math>  <math>= 20 \times \\$32</math>  <math>= \mathbf{\\$640}</math></p>	
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45. Rectangle E is placed next to a large square labelled A. Three identical smaller squares B, C and D join rectangle E and square A, as shown.



The area of square A, is  $16\text{cm}^2$ .

Calculate:

- (a) the length of a side of square A.

Answer: \_\_\_\_\_ (1)

- (b) the area of square B.

Answer: \_\_\_\_\_ (1)

- (c) the area of rectangle E.

Answer: \_\_\_\_\_ (2)

- (d) the area of the entire shape.

Answer: \_\_\_\_\_ (1)

$$\begin{aligned} \text{(a) Area of square} &= 16\text{cm}^2 \\ \text{Side} &= \sqrt{16} \\ &= 4\text{cm} \end{aligned}$$

$$\begin{aligned} \text{(b) Side of B} &= 4 \div 2 \\ &= 2\text{cm} \\ \text{Area of B} &= 2 \times 2 \\ &= 4\text{cm}^2 \end{aligned}$$

$$\begin{aligned} \text{(c) Rectangle E} - L &= 6\text{cm} \quad W = 4\text{cm} \\ \text{Area of rect. E} &= L \times W \\ &= 4 \times 2 \\ &= 8\text{cm}^2 \end{aligned}$$

$$\begin{aligned} \text{(d) Area of square} &= S \times S \\ &= 6 \times 6 \\ &= 36\text{cm}^2 \end{aligned}$$

46.

Laura played 5 games of hockey. The points she got are shown in the table.

Games	1st	2nd	3rd	4th	5th
Points	25	20	22	16	32

- a) What was the difference between her highest and lowest scores?

Answer: \_\_\_\_\_ (1)

- b) What is her MEAN number of points for a game?

Answer: \_\_\_\_\_ (2)

- c) After six games, Laura's mean is 24. How many points did she score in the sixth game?

Answer: \_\_\_\_\_ (2)

$$\begin{aligned} \text{(a) Difference} &= 32 - 16 \\ &= \mathbf{16} \end{aligned}$$

$$\begin{aligned} \text{(b) Mean} &= \frac{25 + 20 + 22 + 16 + 32}{5} \\ &= \frac{115}{5} \\ &= \mathbf{23} \end{aligned}$$

$$\begin{aligned} \text{(c) Total after 6 games} &= 6 \times 24 \\ &= 144 \\ \text{Total after 5 games} &144 - 115 \\ &= \mathbf{29} \end{aligned}$$

**END OF TEST 19**

# TEST

# 20

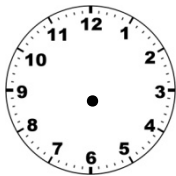

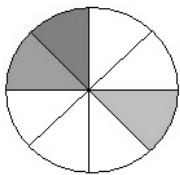
# MATHEMATICS TEST 20

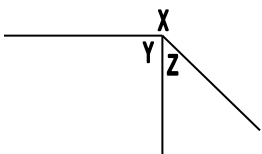
# TIME- 75 MINUTES

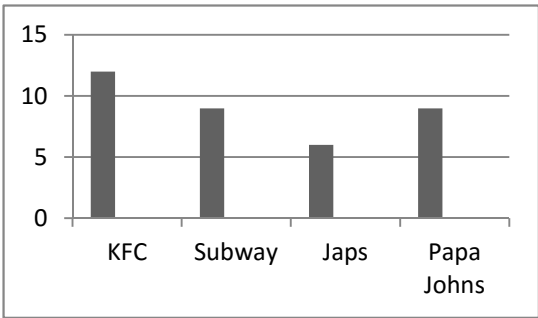
## SECTION 1

Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Marks
1.	What is 0.125 as a percentage? Answer:_____	<b>12.5%</b>	
2.	List the prime numbers from the list below. <div style="border: 1px solid black; padding: 2px; display: inline-block;">2, 3, 4, 5, 6, 7, 8, 9</div> Answer:_____	<b>2, 3, 5, 7</b>	
3.	Write in figures: Three hundred thousand, two hundred and nineteen. Answer:_____	<b>300 219</b>	
4.	Find 40% of 150. Answer:_____	$\frac{40}{100} \times \frac{150}{1}$ <b>= 60</b>	
5.	4.26 – 2.13 Answer:_____	<b>2.13</b>	
6.	32 is $\frac{1}{5}$ of a number. What is the number? Answer:_____	$\frac{1}{5} = 32$ $1 = 32 \times 5$ <b>= 160</b>	
7.	$2.85 = (2 \times \square) + (8 \times \frac{1}{10}) + (5 \times \frac{1}{100})$ . The number that fits in the box is: Answer:_____	<b><math>\square = 1</math></b>	

8.	<p>Draw in the hands to show the time.</p> <p><b>8:10</b></p>  <p>Answer: _____</p>									
9.	<p>After spending \$21.35, Newton remains with \$18.85. How much money did he have before?</p> <p>Answer: _____</p>	<p><b>\$21.35 + \$18.85</b> <b>= \$40.20</b></p>								
10.	<p>How many thirds can Jamie get from 5 sausage rolls?</p> <p>Answer: _____</p>	<p><b>1 = 3 – thirds</b> <b>5 = 3 x 5</b> <b>= 15 thirds</b></p>								
11.	<p>Put in the missing number to complete the sequence.</p> <table border="1" data-bbox="274 1106 807 1148"><tr><td>1</td><td>1</td><td>2</td><td>6</td><td>24</td><td>120</td><td></td></tr></table> <p>Answer: _____</p>	1	1	2	6	24	120		<p><b>120 x 6</b> <b>= 720</b></p>	
1	1	2	6	24	120					
12.	<p>What is the shaded part as a fraction?</p>  <p>Answer: _____</p>	<p><b><math>\frac{3}{8}</math></b></p>								
13.	<p>Express <math>\frac{8}{10} + \frac{9}{100}</math> as a decimal number.</p> <p>Answer: _____</p>	<p><b>0.8 + .09</b> <b>0.89</b></p>								

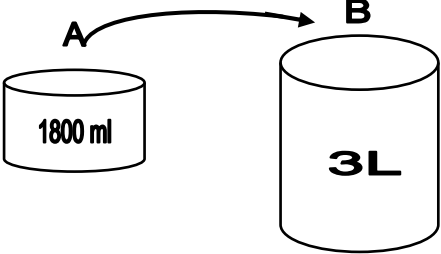
14.	Round 2604 to the nearest hundred.  Answer:_____	$2604 \approx 2600$	
15.	Write 8kg 64g in grams.  Answer:_____grams	$8\text{kg} = 8000\text{g} + 64\text{g}$ $= 8064\text{g}$	
16.	Rearrange the fractions below from greatest to least value.  $\frac{4}{5}$ $\frac{2}{3}$ $\frac{5}{6}$  Answer:_____	$\frac{4}{5}$ $\frac{2}{3}$ $\frac{5}{6}$  $\frac{24}{30}$ $\frac{20}{30}$ $\frac{25}{30}$  $\frac{5}{6}$ $\frac{4}{5}$ $\frac{2}{3}$	
17.	The diagram below shows three angles formed. Which of the angles X, Y or Z is reflex?    Answer:_____	<b>X</b>	
18.	Use ONE symbol below to complete the number statement.  <div style="border: 1px solid black; padding: 5px; display: inline-block;">=   &lt;   &gt;</div>  $\frac{4}{5}$ <span style="border: 1px solid black; padding: 0 10px;"> </span> 65%  Answer:_____	$\frac{4}{5} > 65\%$	

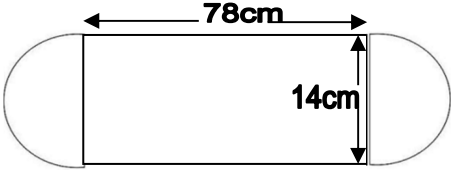
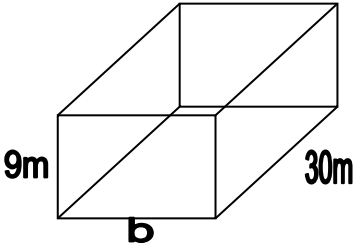
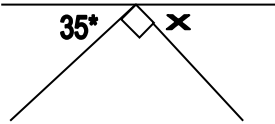
19.	<p>What is the missing number below?</p> $\frac{16}{48} = \frac{8}{x}$ <p>Answer:_____</p>	$\frac{16}{48} = \frac{8}{x}$ $48 \div 2 = 24$ $x = 24$	
20	<p>The bar chart below shows the fast foods pupils in a Standard 5 class enjoy the most.</p>  <p>What is the modal fast food enjoyed?</p> <p>Answer:_____</p>	<p><b>KFC</b></p>	

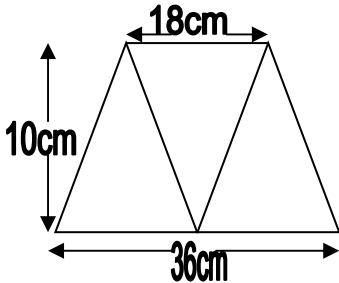
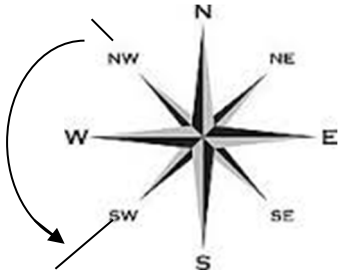
## SECTION 2

**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	ITEMS	Working Column	
21	How much more is $\frac{4}{5}$ than 0.25 as a decimal fraction?  Answer: _____(2)	$\frac{4}{5} = 0.8$ $0.8 - 0.25 = 0.55$ <b>0.55</b>	
22.	<div><div><div>g</div><div>5</div><div>3</div></div><div><div>mg</div><div>190</div><div>520</div></div><div>-</div></div> Answer: _____(2)	<div><div><div>g</div><div>5</div><div>3</div><div>1</div></div><div><div>mg</div><div>1190</div><div>520</div><div>670</div></div><div>-</div></div> <b>1kg 670mg</b>	
23.	200 cups cost \$24.00.  (a) What is the cost of 400 cups?  Answer: _____(1)  (b) Cups are packed in sets of 25 and sold at the same rate. What is the cost of 1 pack?  Answer: _____(2)	(a) 200 cups = \$24 400 cups = \$24 x 2 <b>=\$48</b>  (b) 200 cups = \$24 1 cup = $\frac{\$24}{200}$ 25 cups = $\frac{24}{200} \times \frac{25}{1}$ <b>= \$3</b>	
24.	<div><div><div><div><div></div><div>20cm</div></div><div><div></div><div>10cm</div></div></div></div></div> (a) Name the shape above.  Answer: _____(1)  (b) Calculate its area.  Answer: _____(2)	(a) <b>Isosceles Triangle</b>  (b) Area of Triangle = $\frac{B \times H}{2}$ <b>= <math>\frac{20 \times 10}{2}</math></b> <b>= 100cm<sup>2</sup></b>	

25.	<p>1200 packs at a supermarket contain 3 flavours of juice. <math>\frac{1}{4}</math> of the pack is orange, <math>\frac{3}{5}</math> of the remainder is grapefruit and the rest of the packs are fruit punch. How many packs of fruit punch are there at the supermarket?</p> <p>Answer: _____(3)</p>	<p>Orange = <math>\frac{1}{4} \times \frac{1200}{1}</math>  = 300 orange juice  Remainder = 1200 – 300  = 900  Grapefruit = <math>\frac{3}{5} \times \frac{900}{1}</math>  = 540 grapefruits  Fruit Punch = 1200 – (300 + 540)  = 1200 – 840  = <b>360</b></p>	
26.	 <p>The contents of cylinder A is poured into the uncovered cylinder B. Cylinder B is then filled with water. How many more millimeters of water is needed to fill cylinder B?</p> <p>Answer: _____(2)</p>	<p>3L = 3000ml</p> <p>Water needed = 3000 – 1800  = <b>1200ml</b></p>	

27.	<p>The diagram below shows a model racing car circuit.</p>  <p>Calculate the distance around the circuit.</p> <p>Answer: _____(3)</p>	<p>Circumference = <math>D \times \pi</math>  <math>= 14 \times \frac{22}{7}</math>  <math>= 44\text{cm}</math></p> <p>Distance around = <math>(78 \times 2) + 44</math>  <math>= 156 + 44</math>  <math>= \mathbf{200\text{cm}}</math></p>	
28.	<p>The solid has a volume of <math>2430\text{m}^3</math>. What is the length of b?</p>  <p>Answer: _____(2)</p>	<p>Width = <math>\frac{\text{Volume}}{L \times H}</math>  <math>= \frac{2430}{9 \times 30}</math>  <math>= \frac{2430}{270}</math>  <math>= \mathbf{9\text{m}}</math></p>	
29.	 <p>(a) What is the value of angle x?</p> <p>Answer: _____(1)</p>	<p>Angle <math>x = 180^\circ - (35^\circ + 90^\circ)</math>  <math>= 180^\circ - 125^\circ</math>  <math>= \mathbf{55^\circ}</math></p>	
30.	<p>A class has 35 pupils. On Monday 80% is present. How many pupils are absent?</p> <p>Answer: _____(2)</p>	<p>Present = 80% Absent = 20%</p> <p>Absent = <math>\frac{1}{5} \times \frac{35}{1}</math>  <math>= \mathbf{7 \text{ pupils}}</math></p>	

31.	<p>Three children, Chris, Rik and Sheldon have a mean of 33 marbles.</p> <p>(a) How many marbles do they have altogether?</p> <p>Answer: _____(1)</p> <p>(b) Chris has 10 less marbles than Rik. If Chris has 23 marbles, how many more marbles does Sheldon have than Rik?</p> <p>Answer: _____(2)</p>	<p>(a) Total = Mean <math>\times</math> N(n)  <math>= 33 \times 3</math>  <math>= \mathbf{99 \text{ marbles}}</math></p> <p>(b) Chris = 23  Rik = 33 (23 + 10)  Sheldon = <math>99 - (23 + 33)</math>  <math>= 99 - 56</math>  <math>= 43</math>  Difference between Sheldon and Rik  <math>= 43 - 33</math>  <math>= \mathbf{10 \text{ marbles}}</math></p>	
32.	<p>Calculate the area of the shape below.</p>  <p>Answer: _____(3)</p>	<p>Area of one triangle = <math>\frac{B \times H}{2}</math>  <math>= \frac{18 \times 10}{2}</math>  <math>= \frac{180}{2}</math>  <math>= 90\text{cm}^2</math></p> <p>Area of 3 triangles = <math>90 \times 3</math>  <math>= \mathbf{270\text{cm}^2}</math></p>	
33.	<p>Through how many degrees has the compass pointer been turned?</p>  <p>Answer: _____(2)</p>	<p>8 spaces = <math>360^\circ</math>  1 space = <math>360^\circ \div 8</math>  <math>= 45^\circ</math></p> <p>2 spaces = <math>45^\circ \times 2</math>  <math>= \mathbf{90^\circ}</math></p>	

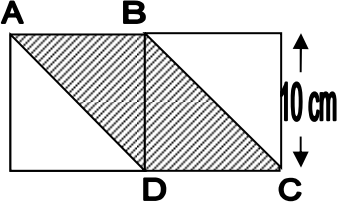
34.	Javed spent 60% of his money on lunch and remained with \$18.00. How much money did he have before lunch?  Answer:_____ (2)	$\begin{aligned} \text{Spent} &= 60\% \\ \text{Remained with} &= 40\% \\ 40\% &= \$18 \\ \frac{2}{5} &= \$18 \\ 1 &= \frac{18}{1} \times \frac{5}{2} \\ &= \$45 \end{aligned}$	
35.	The fountain at a park has a circumference of 132m. Calculate the RADIUS of the fountain.  Answer:_____ (3)	$\begin{aligned} \text{Diameter} &= C \div \pi \\ &= 132 \div \frac{22}{7} \\ &= \frac{132}{1} \times \frac{7}{22} \\ &= 42\text{m} \\ R &= D \div 2 \\ &= 42 \div 2 \\ &= 21\text{m} \end{aligned}$	
36	Snacked size packs of potato chips are sold to a café at \$8.00 per dozen. The café buys 6 dozen packs and retails each pack for \$1.50. How much profit was made on all the packs of potato chips?  Answer:_____ (3)	$\begin{aligned} 1 \text{ dozen} &= \$8 \\ 6 \text{ dozens} &= \$8 \times 6 \\ \text{C.P} &= \$48 \\ \text{Total} &= 12 \times 6 \\ &= 72 \\ \text{S.P} &= \$1.50 \times 72 \\ &= \$108 \\ \text{Profit} &= \text{S.P} - \text{C.P} \\ &= \$108 - \$48 \\ &= \$60 \end{aligned}$	
37.	Insert the two missing numbers in the pattern below.  1, 4, 9, 16, _____, 36, _____.  Answer:_____ (2)	$5^2 = 25 \quad 7^2 = 49$	
38	A car travels 60km in 24 minutes. How far will the car travel in $1\frac{1}{2}$ hours?  Answer:_____ (3)	$\begin{aligned} 24 \text{ mins} &= 60\text{km} \\ 1 \text{ min} &= \frac{60}{24} \\ 90\text{mins} &= \frac{60}{24} \times \frac{90}{1} \\ &= 225\text{km} \end{aligned}$	

39.	<p>A loan of \$5000.00 taken for three years generated an amount of \$5750.00 when completely repaid. Calculate the rate at which the loan was given.</p> <p>Answer:_____ % (3)</p>	$R = \frac{S.I \times 100}{P \times T}$ $= \frac{750 \times 100}{5000 \times 3}$ $= 5\%$									
40.	<p>The pictograph below shows persons seated in four rows in a theatre.</p> <table border="1"><tr><td>Row 1</td><td>☆ ☆ ☆ ☆</td></tr><tr><td>Row 2</td><td>☆ ☆ ☆</td></tr><tr><td>Row 3</td><td>☆ ☆ ☆ ☆</td></tr><tr><td>Row 4</td><td>☆ ☆ ☆ ☆ ☆</td></tr></table> <p>☆ = 5 persons</p> <p>How many more persons must be seated to make a total of 100?</p> <p>Answer:_____ (2)</p>	Row 1	☆ ☆ ☆ ☆	Row 2	☆ ☆ ☆	Row 3	☆ ☆ ☆ ☆	Row 4	☆ ☆ ☆ ☆ ☆	$16 \times ☆ = 16 \times 5$ $= 80$ $100 - 80 = 20 \text{ more persons}$	
Row 1	☆ ☆ ☆ ☆										
Row 2	☆ ☆ ☆										
Row 3	☆ ☆ ☆ ☆										
Row 4	☆ ☆ ☆ ☆ ☆										

### SECTION 3

**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

NO	ITEMS	WORKING COLUMN								
41	<p>Employees at a factory are paid according to the table below.</p> <table><tr><th>TIME</th><th>WAGE PER HOUR</th></tr><tr><td><b>Regular Time</b> 8 hours per weekday</td><td>\$18.00</td></tr><tr><td><b>Overtime</b> After 4:00 pm on weekdays</td><td><b>Time and a half</b> regular wage</td></tr><tr><td><b>Weekends</b> 6 hours on Saturdays</td><td><b>Two times</b> regular wage</td></tr></table> <p>(a) In addition to his regular hours, Josiah works 6 overtime hours and Saturday last week. Calculate his total wage for last week.</p> <p>Answer: _____(3)</p> <p>(b) Jamie earns \$1044.00 by working on weekdays only. How many overtime hours did Jamie work?</p> <p>Answer: _____(2)</p>	TIME	WAGE PER HOUR	<b>Regular Time</b> 8 hours per weekday	\$18.00	<b>Overtime</b> After 4:00 pm on weekdays	<b>Time and a half</b> regular wage	<b>Weekends</b> 6 hours on Saturdays	<b>Two times</b> regular wage	<p>(a) 1 week = <math>8 \times 5</math> = 40 hours 1 hour = \$18 40 hours = <math>\\$18 \times 40</math> = \$ 720 1 hour overtime (Saturday) = <math>\\$18 \times 2</math> = \$36 6 hours = <math>\\$36 \times 6</math> = \$ 216 6 overtime hours = <math>6 \times (18 \times 1.5)</math> = <math>6 \times 27</math> = \$162 Total = <math>\\$720 + \\$216 + \\$162</math> = <b>\$1098</b></p> <p>(b) 1 hour overtime = <math>\\$18 \times 1.5</math> = \$27</p> <p>Overtime wage = <math>\\$1044 - \\$720</math> = \$324 No. of overtime hours = <math>\\$324 \div \\$27</math> = <b>12 hours</b></p>
TIME	WAGE PER HOUR									
<b>Regular Time</b> 8 hours per weekday	\$18.00									
<b>Overtime</b> After 4:00 pm on weekdays	<b>Time and a half</b> regular wage									
<b>Weekends</b> 6 hours on Saturdays	<b>Two times</b> regular wage									

42.	<p>A company buys a cell phone then resells it for \$2750.00 to make a profit of 10%.</p> <p>(a) How much did the cell phone cost the company?</p> <p>Answer: _____(3)</p> <p>(b) A customer pays 15% VAT on the phone. Calculate the final price the customer paid for the phone?</p> <p>Answer: _____(2)</p>	<p>(a) <math>\frac{110}{100} = \\$2750</math>  <math>1 = \frac{2750}{1} \times \frac{100}{110}</math>  <b>= \$2500</b></p> <p>(b) VAT = 15%  Final Price = \$2750 x 15%  <math>= \frac{2750}{1} \times \frac{15}{100}</math>  <b>= \$412.50</b>  Total = \$2750 + \$412.50  <b>= \$3162.50</b></p>	
43.	<p>Two similar squares are combined and the shape ABCD is shaded.</p>  <p>(a) Name the shape ABCD.</p> <p>Answer: _____(1)</p> <p>(b) What is the area of the shape ABCD?</p> <p>Answer: _____(2)</p> <p>(c) Each diagonal line is 15cm long. Calculate the perimeter of the shape ABCD.</p> <p>Answer: _____(2)</p>	<p>(a) <b>Parallelogram</b></p> <p>(b) Area of triangle = <math>\frac{B \times H}{2}</math>  <math>= \frac{10 \times 10}{2}</math>  <b>= 50cm<sup>2</sup></b></p> <p>Area of ABCD = 50 + 50  <b>= 100cm<sup>2</sup></b></p> <p>(c) Perimeter of ABCD  <b>= 15 + 15 + 10 + 10</b>  <b>= 50cm</b></p>	

44.

(a) A set of cards in a game are worth 1,2,3 or 4 points as shown.



Four players drew 3 cards each and recorded their points on the table. The table is incomplete.

Players	Draws			Total	Frequency
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
Marc	3	3	4	10	III III
Justin	4	2	3	9	III III
Johann	3	4		9	III III
Adrian	4	3	1		
Total					

(a) Complete the table by placing the missing information for Johann and Adrian.

(2)

(b) What was the total scored for all the players?

Answer: \_\_\_\_\_(1)

(c) What is the mean score per card selected by the players?

Answer: \_\_\_\_\_(2)

(a)

Johann	3	4	2	9	<del>III</del> III
--------	---	---	---	---	--------------------

Adrian	4	3	1	8	<del>III</del> III
--------	---	---	---	---	--------------------

(b) Total = 10 + 9 + 9 + 8  
= 36

(c) Mean = 36 ÷ 12  
= 3

45.	<p>Five family-sized pizzas, each with 18 slices were bought for a family get-together.</p> <p>(a) How many slices of pizza were there?</p> <p>Answer_____ (1)</p> <p>(b) After the get-together, one sixth of one pizza was left over. How many slices of pizza were left over?</p> <p>Answer_____ (2)</p> <p>(c) Each person attending the get-together ate 3 slices of pizza. How many persons attended the get-together?</p> <p>Answer_____ (2)</p>	<p>(a) 1 pizza = 18 slices  5 pizzas = <math>18 \times 5</math>  = <b>90 slices</b></p> <p>(b) Left over = <math>\frac{1}{6} \times \frac{18}{1}</math>  = <b>3 slices</b></p> <p>(c) Eaten = <math>90 - 3</math>  = 87 slices</p> <p>No. of persons = <math>87 \div 3</math>  = <b>29 persons attended</b></p>	
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46.	<p>At an award ceremony, there are tables for 4 guests or 6 guests. There are nine tables for 4 guests and fifteen for 6 guests.</p> <p>(a) What is the maximum number of guests that can sit at the 6 seater tables?</p> <p>Answer: _____(1)</p> <p>(b) In the morning there are 122 guests seated. All the six seater tables are filled. What is the least number of 4 seater tables that are left unoccupied?</p> <p>Answer: _____(2)</p> <p>(c) In the afternoon, there are 60 guests. An EQUAL number of 4 seater and 6 seater tables are used. How many of each type of tables are used?</p> <p>Answer: _____(2)</p>	<p>(a) Six Seaters = <math>15 \times 6</math> = 90 persons</p> <p>(b) Four seaters occupied = <math>122 - 90</math> = <math>32 \div 4</math> = 8</p> <p>(c) Tables = <math>4 + 6</math> = 10 Total guests = 60 Tables = <math>60 \div 10</math> = 6</p> <p><b>6 -- 4 seaters</b> <b>6 -- 6 seaters</b> (<math>24 + 36 = 60</math>)</p>	
	<b>End of Test 20</b>		

# TEST

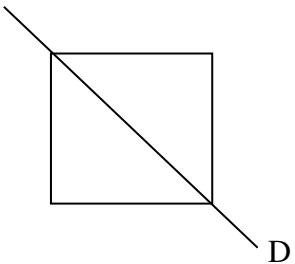
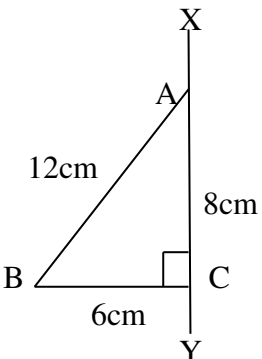
# 21



## SECTION 1

Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.









No.	Items	Working Column	Marks
1.	Write the largest number value which can be written with five digits.  Answer _____	<b>99 999</b>	
2.	Write 375 029 in words.  Answer _____	<b>Three hundred and seventy-five thousand and twenty-nine</b>	
3.	Lisa had 50 plums, she gave away $\frac{2}{5}$ of the plums to Shania. How many plums did she keep for herself?  Answer _____	$\text{Gave} = \frac{2}{5}$ $\text{Kept} = \frac{3}{5}$  $\text{Kept} = \frac{3}{5} \times \frac{50}{1}$ <b>= 30 plums</b>	
4.	A scout leader had 9 metres of rope for his cub scouts. He divided it equally for 18 scouts. What length of rope in <b>centimetres</b> did each cub scout receive?  Answer _____	$9 \div 18 = 0.5\text{m}$  $0.5 \times 100 = \mathbf{50\text{cm}}$	

5.	<p>Jason had \$20.50. Karen had \$8.50 more than Jason. How much money do they have altogether?</p> <p>Answer _____</p>	$  \begin{aligned}  &J + K \\  &= \$20.50 + (\$20.50 + \$8.50) \\  &= \$20.50 + \$29.00 \\  &= \mathbf{\$49.50}  \end{aligned}  $	
6.	<p>The length of one side of a square is 24cm. What is the perimeter of the square?</p> <p>Answer _____</p>	$  \begin{aligned}  &\text{Side} = 24\text{cm} \\  &\text{Perimeter of square} = S \times 4 \\  &= 24 \times 4 \\  &= \mathbf{96\text{cm}}  \end{aligned}  $	
7.	<p>Write in descending order :</p> <p>0.07, 0.70, 0.17, 0.71.</p> <p>Answer _____</p>	$\mathbf{0.71, 0.70, 0.17, 0.07}$	
8.	<p>How many hundredths is there in 3.4?</p> <p>Answer _____</p>	$  \begin{aligned}  &3.4 \times 100 \\  &= \mathbf{340\text{cm}}  \end{aligned}  $	

9.	 <p>The line CD divides the square into two triangles. If the area of each triangle is <math>8\text{cm}^2</math>, what is the length of a side of the square?</p> <p>Answer _____</p>	<p>Area of each <math>\triangle = 8\text{cm}^2</math>  Area of 2 <math>\triangle = 16\text{cm}^2</math></p> <p>Area of square = <math>16\text{cm}^2</math>  Side of square = <math>\sqrt{16\text{cm}^2}</math>  = <b>4cm</b></p>	
10.	<p>0.8kg of sweets cost \$6.40. What is the cost of 100g of sweets?</p> <p>Answer _____</p>	<p><math>0.8 = \\$6.40</math>  <math>\frac{8}{10} = \\$6.40</math>  <math>1 = \\$6.40 \times \frac{5}{4}</math>  = \$8 x 0.1  = <b>\$ 0.80</b></p>	
11.	 <p>When triangle ABC is reflected about the line XY, what type of triangle will be formed with the object and the image?</p> <p>Answer _____</p>	<p><b>Equilateral Triangle</b></p>	

12.	<div><div>11: 20</div><div>Digital Time</div><div></div><div>Show the digital time on the analog clock face by drawing the hour and minute hands.</div></div>	<div></div>											
13.	<div><div>Questions 13 and 14 are based on the information below. A farmer plants the following seeds in his garden.</div><table><tr><th>SEED TYPE</th><th>NO.OF SEEDS</th></tr><tr><td>Pumpkin</td><td>50</td></tr><tr><td>Tomato</td><td>45</td></tr><tr><td>Pepper</td><td>37</td></tr><tr><td>Total</td><td>132</td></tr></table><div>Which seed represents the mode in the above table?</div><div>Answer _____</div></div>	SEED TYPE	NO.OF SEEDS	Pumpkin	50	Tomato	45	Pepper	37	Total	132	<div>Pumpkin (most seeds)</div>	
SEED TYPE	NO.OF SEEDS												
Pumpkin	50												
Tomato	45												
Pepper	37												
Total	132												
14.	<div>What is the mean number of seeds planted in the garden?</div> <div>Answer _____</div>	<div>Mean = <math>\frac{132}{3}</math> = 44</div>											

15.	<p>Kelly had 25 mangoes and 15 apples in a basket. What PERCENT of the fruits is apples?</p> <p>Answer _____</p>	<p>Total Fruits = 25 + 15 = 50</p> <p><math>\frac{15}{50} \times \frac{100}{1} = 30\%</math></p>	
16.	<div data-bbox="433 556 665 724" data-label="Image"> </div> <p>Rudy                  Randy</p> <p>Rudy has 3.75 kg of fish on his arm of the scale. Randy has 5.5 kg on his arm of the scale. How many more kilograms of fish is needed to make Rudy's arm equal to Randy's ?</p> <p>Answer _____</p>	<p>5.50 kg - 3.75kg <u>1.75kg</u></p>	
17.	<div data-bbox="412 1215 609 1365" data-label="Image"> </div> <p>Name the solid shape shown above.</p> <p>Answer _____</p>	<p><b>Cylinder</b></p>	
18.	<p>Shawn entered primary school on his fifth birthday in the year 2008. What year was he born?</p> <p>Answer _____</p>	<p>2008 - 5 = 2003</p>	

19.	Micheal measured the weight of his dog. Which unit is the most appropriate unit to measure the dog’s weight?  Answer _____	<b>kilograms</b>							
20.	How many Smiley Faces are needed to complete the table below to show the favourite doll? <table border="1"><thead><tr><th>Type of Doll</th><th>Pupils</th><th>Total</th></tr></thead><tbody><tr><td>Barbie</td><td> </td><td>60</td></tr></tbody></table>  = 12 pupils  Answer _____	Type of Doll	Pupils	Total	Barbie	 	60	<b>60 ÷  = 5</b>	
Type of Doll	Pupils	Total							
Barbie	 	60							

## SECTION 2

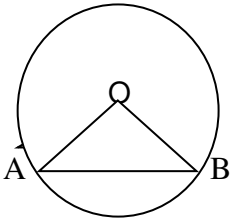
**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
21.	<p>What is the quotient when <math>4\frac{2}{3}</math> is divided by 8?</p> <p>Answer _____ (2)</p>	$4\frac{2}{3} \div 8$ $= \frac{14}{3} \div \frac{8}{1}$ $= \frac{14}{3} \times \frac{1}{8}$ $= \frac{7}{12}$	
22.	<p>In a Standard Five class there are 18 boys and 12 girls. Write the number of girls in the class as a PERCENT.</p> <p>Answer _____ (2)</p>	<p>Total = 30</p> $\text{Girls} = \frac{12}{30} \times \frac{100}{1}$ $= 40\%$	
23.	<p>The sum of 19.35, 4.03 and <input type="text"/> equals 30.47.</p> <p>Calculate the value of <input type="text"/>.</p> <p>Answer _____ (2)</p>	$\square = 30.47 - (19.35 + 4.03)$ $\square = 30.47 - 23.38$ $\square = 7.09$	
24.	<p>Complete the sequence below:</p> <p>0, 1, 1, 2, 3, 5, 8, __, __.</p> <p>Answer _____ (2)</p>	$8 + 5 = 13$ $13 + 8 = 21$ <p><b>13, 21</b></p>	

25.	<p>40% of a number is equal to 25% of 320. What is the number?</p> <p>Answer _____ (3)</p>	$25\% \times 320 = \frac{1}{4} \times \frac{320}{1} = \mathbf{80}$ $40\% = 80$ $\frac{2}{5} = 80$ $1 = \frac{80}{1} \times \frac{5}{2}$ $= \mathbf{200}$	
26.	<p>Sally had 120 pineapples. She sold <math>\frac{1}{5}</math> of the pineapples on Monday and bought <math>\frac{1}{4}</math> of the original number of pineapples on Tuesday. How many pineapples does she have now?</p> <p>Answer _____ (3)</p>	$\text{Sold} = \frac{1}{5} \times \frac{120}{1}$ $= 24$ $\text{Bought} = \frac{1}{4} \times \frac{120}{1}$ $= 30$ $\text{Sally now has} = (120 - 24) + 30$ $= 96 + 30$ $= \mathbf{126}$	
27.	<p><math>\frac{3}{7}</math> of Ariana's farm animals are chickens and the rest are ducks. If there are 540 chickens, how many ducks does Ariana have on the farm?</p> <p>Answer _____ (3)</p>	$\frac{3}{7} = 540$ $1 = \frac{540}{1} \times \frac{7}{3}$ $= 1260 \text{ animals}$ $\text{Ducks} = \frac{4}{7} \times \frac{1260}{1}$ $= \mathbf{720 \text{ ducks}}$	

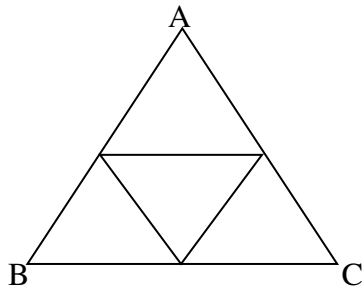
28.	<p>Complete the table below:</p> <table><tr><th>Fraction</th><th>Decimal</th><th>Percent</th></tr><tr><td><math>\frac{1}{3}</math></td><td>0.33</td><td>_____</td></tr><tr><td>_____</td><td>0.4</td><td>40%</td></tr><tr><td><math>\frac{3}{8}</math></td><td>_____</td><td><math>37\frac{1}{2}\%</math></td></tr></table> <p>(3)</p>	Fraction	Decimal	Percent	$\frac{1}{3}$	0.33	_____	_____	0.4	40%	$\frac{3}{8}$	_____	$37\frac{1}{2}\%$	<table><tr><th>Fraction</th><th>Decimal</th><th>Percent</th></tr><tr><td><math>\frac{1}{3}</math></td><td>0.33</td><td><math>33\frac{1}{3}\%</math></td></tr><tr><td><math>\frac{2}{5}</math></td><td>0.4</td><td>40%</td></tr><tr><td><math>\frac{3}{8}</math></td><td><b>0.375</b></td><td><math>37\frac{1}{2}\%</math></td></tr></table>	Fraction	Decimal	Percent	$\frac{1}{3}$	0.33	$33\frac{1}{3}\%$	$\frac{2}{5}$	0.4	40%	$\frac{3}{8}$	<b>0.375</b>	$37\frac{1}{2}\%$
Fraction	Decimal	Percent																								
$\frac{1}{3}$	0.33	_____																								
_____	0.4	40%																								
$\frac{3}{8}$	_____	$37\frac{1}{2}\%$																								
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$\frac{1}{3}$	0.33	$33\frac{1}{3}\%$																								
$\frac{2}{5}$	0.4	40%																								
$\frac{3}{8}$	<b>0.375</b>	$37\frac{1}{2}\%$																								
29.	<p>Pamela bought a stereo set for \$3000.00. She sold it and made a <b>profit</b> of 15%. What is the selling price of the stereo set?</p> <p>Answer _____ (2)</p>	<p><b>S.P = 100% + 15%</b> <b>= 115%</b> <b>S.P = <math>\frac{115}{100} \times \frac{3000}{1}</math></b> <b>= \$3450</b></p>																								
30.	<p>Tammy bought 5 apples and 8 pears at a vegetable stall. Each pear costs \$3.50. Her total bill was \$40.50.</p> <p>What was the cost of an apple?</p> <p>Answer _____ (3)</p>	<p><b>8 pears = 8 x \$3.50</b> <b>= \$28</b></p> <p><b>Total = \$40.50 - \$28.00</b> <b>Apples = \$12.50</b> <b>5 apples = \$12.50</b> <b>1 apple = <math>\\$12.50 \div 5</math></b> <b>= \$2.50</b></p>																								

31.	<p>What is the Simple Interest on \$25 000 for 5 years at 15% per month?</p> <p>Answer _____ (2)</p>	$\begin{aligned}\text{Simple Interest} &= \frac{P \times R \times T}{100} \\ &= \frac{25\,000 \times 15 \times 5}{100} \\ &= \$18\,750\end{aligned}$	
32.	<p>The length of a rectangle is 26 cm and the area is 468 cm<sup>2</sup>. What is the width of the rectangle?</p> <p>Answer _____ (2)</p>	$\begin{aligned}\text{Width} &= \frac{\text{Area}}{\text{Length}} \\ &= \frac{468\text{cm}^2}{26\text{ cm}} \\ &= 18\text{cm}\end{aligned}$	
33.	<p>Water flows out from a tank at a rate of 1200 liters every 4 hours. At the same rate, how many litres can be emptied in exactly 6 hours.?</p> <p>Answer _____ (2)</p>	$\begin{aligned}4\text{ hours} &= 1200\text{L} \\ 1\text{hour} &= \frac{1200}{4} \\ 6\text{ hours} &= \frac{1200}{4} \times \frac{6}{1} \\ &= 1800\text{ L}\end{aligned}$	

34.	<p>The sum of two numbers is 36 and their difference is 4.</p> <p>(a) What are the two numbers?</p> <p>Answer _____ (2)</p> <p>(b) What is the product of the two numbers?</p> <p>Answer _____ (1)</p>	<p>(a)</p> $X + Y = 36$ $X - Y = 4$ <p>Number Bonds for 36</p> $20 + 16 = 36$ $20 - 16 = 4$ <p><math>\therefore</math> the two numbers are <b>20 &amp; 16</b></p> <p>(b) <math>20 \times 16 = \mathbf{320}</math></p>	
35.	 <p>O is the centre of the circle. Angle AOB is equal to <math>120^\circ</math>.</p> <p>(a) Calculate the value of angle OAB.</p> <p>Answer _____ degrees. (1)</p> <p>(b) The length of the minor arc AB is 10cm. What is the circumference of the circle?</p> <p>Answer _____ (2)</p>	<p>(a) Triangle OAB is isosceles</p> $\therefore \text{OAB} = \frac{(180^\circ - 120^\circ)}{2}$ $= \frac{60^\circ}{2}$ $= \mathbf{30^\circ}$ <p>(b) Minor Arc AB = <math>\frac{120}{360}</math></p> $= \frac{1}{3}$ <p><b>Circumference</b></p> $\frac{1}{3} = 10\text{cm}$ $1 = 10\text{cm} \times 3$ $= \mathbf{30\text{cm}}$	

36.	<p>Sheldon's monthly salary is \$8500.00. He spent \$2500.00 on food, made a mortgage payment of \$1500.00 and saved \$1800.00 every month.</p> <p>(a) How much money will Sheldon be left with for the rest of the month?</p> <p>Answer _____ (2)</p> <p>(b) If he uses \$750.00 for car maintenance, what would be his total <b>expenses</b>?</p> <p>Answer _____ (1)</p>	<p>(a) Salary = \$8500 Left with = \$8500 - (\$2500+\$1500+\$1800) = \$8500 - \$5800 = <b>\$2700</b></p> <p>(b) Total Expenses = \$2500 + \$1500 + \$750 = <b>\$4750</b></p> <p><i>*Savings should not be counted as an expense</i></p>	
37.	<p>Angle XYZ is <math>55^\circ</math>. Calculate the size of the angle ZXY.</p> <div data-bbox="349 1255 641 1575" data-label="Diagram"> </div> <p>Answer _____ (2)</p>	<p><math>ZXY = 180^\circ - (55^\circ + 55^\circ)</math>  <math>= 180^\circ - 110^\circ</math>  <math>= \mathbf{70^\circ}</math></p>	

38.



- (a) How many triangles are in the above figure?

Answer \_\_\_\_\_ (1)

- (b) Name the solid shape that can be formed from the above figure.

Answer \_\_\_\_\_ (1)

- (c) If triangle ABC is an equilateral triangle and its area is  $40\text{cm}^2$ , what is the area of one of the smaller triangles?

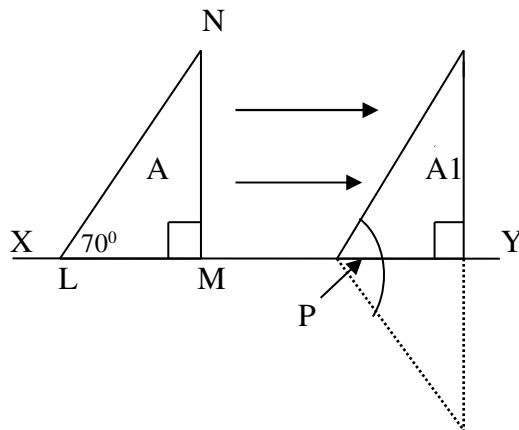
Answer \_\_\_\_\_ (1)

(a) **5**

(b) **Triangular Based Pyramid**

(c)  $40\text{cm}^2 \div 4 = 10\text{cm}^2$

39.



(a) Slide/Translation

(b)  $70^\circ$

- (a) Name the type of transformation when triangle (A) is moved to its image (A1).

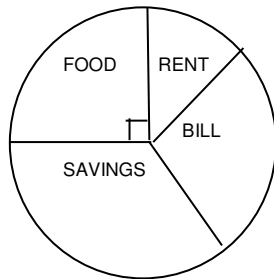
Answer \_\_\_\_\_ (1)

- (b) The image (A1), is flipped along the mirror line XY. Calculate the angle formed at point P in the combined shape.

Answer \_\_\_\_\_ (2)

40.

The Pie Chart shown below represents Jason's monthly budget.



He spends \$1250.00 on food. Calculate his monthly budget.

Answer \_\_\_\_\_ (2)

$$\frac{1}{4} = \$1250$$

$$1 = \$1250 \times 4$$

$$= \$5000$$

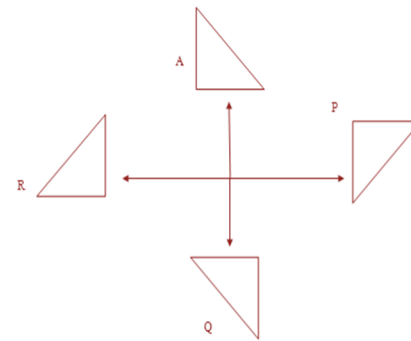
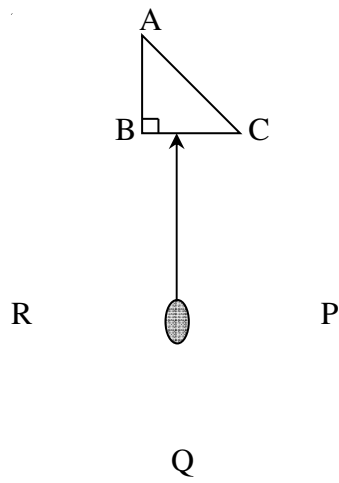
### SECTION 3

**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
41.	<p>Joel gave 40% of his marbles to Sasha and he sold <math>66\frac{2}{3}\%</math> of the remainder to Asif. Joel remained with 75 marbles.</p> <p>(a) Calculate how many marbles Joel had at first.</p> <p>Answer _____ (3)</p> <p>(b) How many marbles was Sasha given?</p> <p>Answer _____ (2)</p>	<p>(a) Gave = 40%</p> $\text{Sold} = \frac{2}{3} \times \frac{3}{5}$ $= \frac{2}{5}$ $\text{Sold} + \text{Gave} = 40\% + 40\%$ $= 80\%$ $\text{Left with} = 20\% \text{ or } \frac{1}{5}$ $\frac{1}{5} = 75$ $1 = 75 \times 5$ $= \mathbf{375 \text{ marbles}}$ <p>(b) Sasha = <math>\frac{2}{5} \times \frac{375}{1}</math></p> $= \mathbf{150 \text{ marbles}}$	
42.	<p>The measurement of Shiva's three bedrooms in his house is as follows:</p> <p>Bedroom one: 12m by 10m  Bedroom two: 12m by 10m  Bedroom three: 12m by 14m</p> <p>(a) What is the total area of the three bedrooms of Shiva's house?</p> <p>Answer _____ (3)</p> <p>(b) Carpet is sold at \$35.00 per square metre. How much money must Shiva spend to carpet the three bedrooms?</p> <p>Answer _____ (2)</p>	<p>(a) Total Area</p> $12 \times 10 = 120$ $12 \times 10 = 120$ $12 \times 14 = \underline{168} +$ $\mathbf{\underline{408m^2}}$ <p>(b) <math>1m^2 = \\$35</math></p> $408m^2 = \$35 \times 408$ $= \mathbf{\$14\,280}$	

43.	<p>After selling a book for \$196.00, Travis made a profit of 40%.</p> <p>(a) Calculate the cost price of the book.</p> <p>Answer _____ (3)</p> <p>(b) How much money did Travis make on the sale of the book?</p> <p>Answer _____ (2)</p>	<p>(a) <math>140\% = \\$196</math>  <math>\frac{140}{100} = \\$196</math>  <math>\frac{7}{5} = \\$196</math>  <math>1 = \frac{196}{1} \times \frac{5}{7}</math>  <math>= \\$140</math></p> <p>(b) Profit = \$196 - \$140  <math>= \\$56</math></p>	
44.	<p>The cost of 8 litres of gas is \$24.50.</p> <p>(a) What will be the cost of 4 litres of gas?</p> <p>Answer _____ (2)</p> <p>(b) Adam had \$98.00 to buy gas. How many litres of gas can he buy?</p> <p>Answer _____ (3)</p>	<p>(a) 8 L = \$24.50  4L = \$24.50 ÷ 2  <math>= \\$12.25</math></p> <p>(b) \$98 ÷ \$12.25  <math>= 8 \times 4</math>  <math>= 32L</math></p>	

45.



(b)  $3 \times 90^\circ = 270^\circ$

- (a) Rotate triangle ABC in a clockwise direction and draw its new positions at P , Q and R respectively.

(3)

- (b) How many degrees will triangle ABC turn when it reaches R?

Answer \_\_\_\_\_ (2)

46.

The Tally Chart shows the games played by four schools in an inter school competition.

GAMES PLAYED

SCHOOLS	TALLY	TOTAL
A	<div> <div>    </div> <div>    </div> <div>    </div> <div>  </div> </div>	
B		16
C	<div> <div>    </div> <div>    </div> <div>    </div> <div>    </div> </div>	
D	<div> <div>    </div> <div>    </div> <div>    </div> <div>    </div> </div>	20
<b>TOTAL</b>		

(a) Complete the Tally Chart for School's A, B and C.

(3)

(b) What is the mean number of games played by each School?

Answer \_\_\_\_\_ (2)

GAMES PLAYED

SCHOOLS	TALLY	TOTAL
A	<div> <div>    </div> <div>    </div> <div>    </div> <div>  </div> </div>	<b>17</b>
B	<div> <div>    </div> <div>    </div> <div>    </div> <div> </div> </div>	16
C	<div> <div>    </div> <div>    </div> <div>    </div> <div>    </div> </div>	<b>19</b>
D	<div> <div>    </div> <div>    </div> <div>    </div> <div>    </div> </div>	20
<b>TOTAL</b>		<b>72</b>

$$\begin{aligned}
 \text{(b) Mean} &= \frac{72}{4} \\
 &= 18 \text{ games}
 \end{aligned}$$

**END OF TEST 21**

# TEST

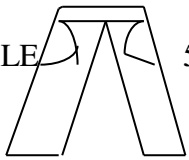
# 22

# MATHEMATICS TEST 22

# TIME- 75 MINUTES

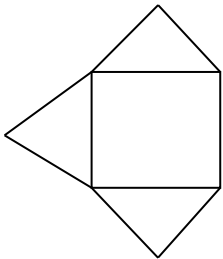
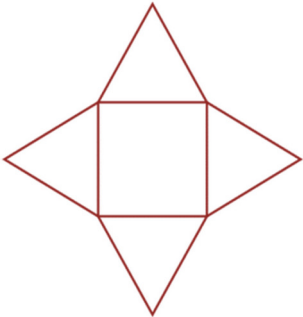
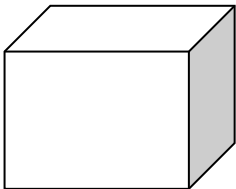
## SECTION 1

Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Marks
1.	<p>In the number 25<u>4</u> 592, write the value of the underlined digit.</p> <p>Answer _____</p>	<b>4000</b>	
2.	<p>Express 47% as a decimal.</p> <p>Answer _____</p>	<b>0.47</b>	
3.	<p>Write the number 20 as the sum of two prime numbers.</p> <p>Answer _____</p>	<b>3 + 17</b>	
4.	<p>Calculate the discount on the pair of jeans marked at \$150.00?</p> <p>SALE  50% DISCOUNT</p> <p>Answer _____</p>	<p><b>Discount = 50% x \$150</b>  <b>= \$150 ÷ 2</b>  <b>= \$75</b></p>	

5.	<p>Peter has 5 toy cars, 6 motor bikes and 9 toy airplanes. What is the percentage of Peter's toy cars?</p> <p>Answer _____</p>	<p>Total Toys = <math>5 + 6 + 9</math> = 20</p> <p>Toy cars = <math>\frac{5}{20} \times \frac{100}{1}</math>  = <b>25%</b></p>	
6.	<p>Calculate <math>7.92 \div 6</math></p> <p>Answer _____</p>	<p><math>7.92 \div 6</math> = <b>1.32</b></p>	
7.	<p>How many eighths are there in <math>2\frac{3}{4}</math>?</p> <p>Answer _____</p>	<p><math>2\frac{3}{4} = \frac{\quad}{8}</math> <math>\frac{11}{4} = \frac{\quad}{8}</math>  <b><math>\square = 22</math></b></p>	
8.	<p>A packet of sugar weighs 25 grams. How much will 9 similar packets weigh?</p> <p>Answer _____</p>	<p>1 pk = 25g 9 pks = <math>25 \times 9</math> = <b>225g</b></p>	
9.	<p>Mary is 20 years old in 2014. In what year was she born?</p> <p>Answer _____</p>	<p><math>2014 - 20 = \mathbf{1994}</math></p>	

10.	<p>The area of a square is <math>36\text{cm}^2</math> . Calculate the perimeter of the square.</p> <p>Answer _____</p>	<p>Area = <math>36\text{cm}^2</math>  Side = <math>\sqrt{36\text{cm}^2}</math>  = 6cm  Perimeter = <math>S \times 4</math>  = <b>24cm</b></p>	
11.	<p>Aunt Mavis sells 5 mangoes for \$7.00. Calculate the cost of a mango.</p> <p>Answer _____</p>	<p>5 mangoes = \$7.00  1 mango = <math>\\$7.00 \div 5</math>  = <b>\$1.40</b></p>	
12.	<p>How much change should I get from \$100.00 if I spend \$58.92?</p> <p>Answer _____</p>	<p>Change = <math>\\$100.00 - \\$58.92</math>  = <b>\$41.08</b></p>	
13.	<p>Thomas has \$20.00 bills and \$5.00 bills in his wallet. What is the least number of \$5.00 bills Thomas can have if he has a total of \$270.00?</p> <p>Answer _____</p>	<p><math>270 \div 20 = 13 \text{ r.}10</math>  Remainder = <math>\\$10 \div 5</math>  = <b>2 -- \$5.00 bills</b></p>	
14.	<p>Block A is 250g. If Block B is twice as heavy as Block A and Block C is twice as heavy as Block B, what is the weight of Block C?</p> <p>Answer _____</p>	<p>Block A = 250g  Block B = <math>250 \times 2</math>  = 500g  Block C = <math>500\text{g} \times 2</math>  = <b>1000g</b></p>	

15.	<p>The time on a clock is 12:45 am. If it is 12 minutes fast, what is the correct time?</p> <p>Answer _____</p>	$12:45 - 0:12 = \mathbf{12:33}$	
16.	<p>Complete the statement below.</p> <p>A square based pyramid contains _____ vertices.</p> <p>Answer _____</p>	$\mathbf{5}$	
17.	<p>Complete the drawing to show the net of a square based pyramid.</p> 		
18.	<p>The volume of the cube shown below is <math>64\text{cm}^3</math>. What is the length of each side?</p>  <p>Answer _____</p>	$\text{Volume} = 64\text{cm}^3$ $\text{Side} = \sqrt[3]{\text{Volume}}$ $= \sqrt[3]{64\text{cm}^3}$ $= \mathbf{4\text{cm}}$	

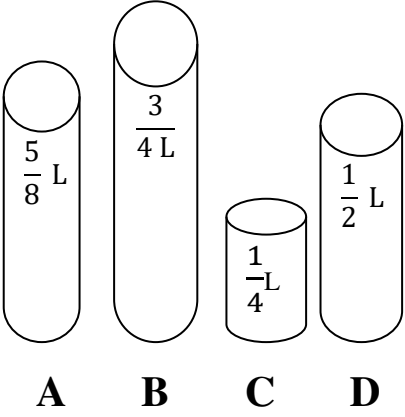
19.	<p>The heights of five boys are recorded below.</p> <table><tr><td>John</td><td>Larry</td><td>Mark</td><td>Sam</td><td>Allan</td></tr><tr><td>140cm</td><td>127cm</td><td>125cm</td><td>135cm</td><td>129cm</td></tr></table> <p>If the boys stand in order of their heights starting with the shortest, who will be in the middle?</p> <p>Answer _____</p>	John	Larry	Mark	Sam	Allan	140cm	127cm	125cm	135cm	129cm	<p>125 127 129 135 140</p> <p>↓</p> <p><b>Allan</b></p>	
John	Larry	Mark	Sam	Allan									
140cm	127cm	125cm	135cm	129cm									
20.	<p>A pie chart represents 3 flavours of ice-cream preferred by the children of Standard 4. Half of the students preferred chocolate and 25% preferred strawberry. If 12 children liked vanilla, how many children are in the class?</p> <p>Answer _____</p>	<p>Vanilla = 100% - (50%+25%)</p> <p>= 100% - 75%</p> <p>= 25%</p> <p><math>25\% = \frac{1}{4}</math></p> <p><math>\frac{1}{4} = 12</math></p> <p><math>1 = 12 \times 4</math></p> <p>= 48</p>											

## SECTION 2

**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

21.	<p>Subtract 3.72 from 5.1.</p> <p>Answer _____ (2)</p>	$\begin{array}{r} 5.10 - \\ \underline{3.72} \\ 1.38 \end{array}$	
22.	<p>A free hamper is given to every 10<sup>th</sup> customer to celebrate the 10<sup>th</sup> Anniversary of Charlene's grocery.</p> <p>(a) How many customers received a hamper if 272 customers entered the grocery?</p> <p>Answer _____ (1)</p> <p>(b) How many more customers must enter the grocery if another hamper is to be given away?</p> <p>Answer _____ (1)</p>	<p>(a) <math>272 \div 10 = 27 \text{ r.}2</math></p> <p><b>27 customers received a hamper</b></p> <p>(b) Remainder = 2 Every 10<sup>th</sup> customer received a hamper, <math>\therefore 10 - 2 = 8</math> <b>8 more customers must enter the grocery</b></p>	
23.	<p>Three bells begin to chime together. The first chimes every 6 minutes, the second every 5 minutes and the third every 3 minutes.</p> <p>After how many minutes will they chime together?</p> <p>Answer _____(2)</p>	<p>L.C.M of 6, 5, 3</p> <p><b>=30 minutes of half hour</b></p>	
24.	<p>A chef needs 85 carrot sticks. The carrot sticks come in bags of 12. How many bags of carrots must the chef buy?</p> <p>Answer _____(2)</p>	<p><math>85 \div 12 = 7 \text{ r.}1</math></p> <p><b><math>\therefore</math> 8 bags of carrot sticks must be bought</b></p>	





25.	<p>After filling 24 boxes with 12 pencils each, Larry had 8 pencils left.</p> <p>(a) How many pencils Larry have altogether?</p> <p>Answer _____ (2)</p> <p>(b) How many boxes could be filled if he puts 8 pencils in each box instead?</p> <p>Answer _____ (1)</p>	<p>(a) <math>\text{Larry} = (24 \times 12) + 8</math>  <math>= 288 + 8</math>  <math>= \mathbf{296}</math></p> <p>(b) <math>\text{No. of boxes} = 296 \div 8</math>  <math>= \mathbf{37}</math></p>	
26.	<p>30% of Jaydon's money is \$42.00. How much is 50% of his money?</p> <p>Answer _____ (3)</p>	<p><math>30\% = \frac{3}{10}</math>  <math>\frac{3}{10} = \\$42</math>  <math>1 = \frac{42}{1} \times \frac{10}{3}</math>  <math>= 140</math>  <math>50\% = 140 \div 2</math>  <math>= \mathbf{\\$70}</math></p>	
27.	<p>The product of 2.9 and 5.6 is</p> <p>Answer _____ (3)</p>	<p><math>2.9 \times 5.6</math>  <math>= \begin{array}{r} 29 \times 56 \\ 174 + 1450 \\ \hline 1624 \end{array} = \mathbf{16.24}</math></p>	
28.	<p>Betty eats <math>\frac{1}{7}</math> of a watermelon, and gives away <math>\frac{2}{3}</math> of the remainder. What fraction of the watermelon does she have left?</p> <p>Answer _____ (3)</p>	<p><math>\text{Eats} = \frac{1}{7}</math>   <math>\text{Remainder} = \frac{6}{7}</math>  <math>\text{Gives away} = \frac{2}{3} \times \frac{6}{7}</math>  <math>= \frac{4}{7}</math>  <math>\text{Fraction left} = 1 - (\frac{1}{7} + \frac{4}{7})</math>  <math>= 1 - \frac{5}{7}</math>  <math>= \frac{2}{7}</math></p>	

29.	 <p>(a) Using each container once, which TWO containers can Bob use to measure 1 litre of water?</p> <p>Answer _____ (1)</p> <p>(b) Lester fills the containers labeled A and D with water. What is the volume of water in the 2 containers?</p> <p>Answer _____ (1)</p>	<p>(a) <math>B + C = \frac{3}{4} + \frac{1}{4}</math>  <math>= 1</math></p> <p>(b) Volume of water  <math>= \frac{5}{8} + \frac{1}{2}</math>  <math>= \frac{5}{8} + \frac{4}{8}</math>  <math>= \frac{9}{8}</math>  <math>= 1\frac{1}{8}</math></p>	
30.	<p>Crystal begins private tuition at 10:30 am. She charges \$15.00 per hour and earns \$75.00.</p> <p>(a) How many hours does she work?</p> <p>Answer _____ (1)</p> <p>(b) At what time does she finish the private tuition?</p> <p>Answer _____ (1)</p>	<p>(a) Fee = \$15  Earnings = \$75  No. of hours = <math>\\$75 \div \\$15</math>  = <b>5 hours</b></p> <p>(b) 10:30 + 5:00  = <b>3:30pm</b></p>	

31.	<p>The perimeter of a rectangle is 30cm and the breadth is 5cm. Calculate its length.</p> <p>Answer _____ (2)</p>	$\begin{aligned}\text{Length} &= (\text{Perimeter} - 2W) \div 2 \\ &= (30 - 10) \div 2 \\ &= 20 \div 2 \\ &= \mathbf{10\text{cm}}\end{aligned}$	
32.	<p>A mechanic has to be at work by 9:00 a.m. It takes him 25 minutes to be ready for work and 45 minutes to travel to work. What is the LATEST time he can get up to be at work on time?</p> <p>Answer _____ (3)</p>	$\begin{aligned}\text{Latest time} &= 9:00 - (25 + 45) \\ &= 9:00 - 0:70 \\ &= 9:00 - 1:10 \\ &= \mathbf{7:50\text{am}}\end{aligned}$	
33.	<p>Jill buys 24 books at \$1.50 each. She sells them at 2 books for \$5.00. How much profit does she make?</p> <p>Answer _____ (3)</p>	$\begin{aligned}\text{C.P} &= 24 \times \$1.50 \\ &= \$36 \\ \text{S.P} &= (24 \div 2) \times \$5.00 \\ &= 12 \times \$5 \\ &= \$60 \\ \text{Profit} &= \text{S.P} - \text{C.P} \\ &= \$60 - \$36 \\ &= \mathbf{\$ 24}\end{aligned}$	
34.	<p>\$2800.00 is shared among three brothers Sam, Joe and Billy such that Joe receives \$200.00 more than Sam and Billy receives \$300.00 more than Joe. How much money does each boy receive?</p> <p>Answer : Sam _____ Joe _____ Billy _____ (3)</p>	$\begin{aligned}\text{Sam} &= X \\ \text{Joe} &= X + \$200 \\ \text{Billy} &= (X + \$200) + 300 \\ \text{Billy} &= X + \$500 \\ \therefore \\ X + X + 200 + X + 500 &= 2800 \\ 3X + 700 &= 2800 \\ 3X &= 2800 - 700 \\ 3X &= \$2100 \\ X &= \$700 \\ \text{Sam} &= \mathbf{\$700} \\ \text{Joe} &= \mathbf{\$900} (\$700 + \$200) \\ \text{Billy} &= \mathbf{\$1200} (\$700 + \$500)\end{aligned}$	

35.	<p>Patrick rides 4 kilometres in 30 minutes. How far does he ride in 75 minutes?</p> <p>Answer _____ (3)</p>	<p>30 mins = 4 km  <math>1 \text{ min} = \frac{4}{30}</math>  <math>75 \text{ mins} = \frac{4}{30} \times \frac{75}{1}</math>  <b>= 10km</b></p>	
36.	<div data-bbox="280 541 808 1094" data-label="Image"> </div> <p>(a) Draw the image of Triangle M using the line AB as the mirror line.</p> <p>(1)</p> <p>(b) What is the name of the triangle formed by the triangle M and its image?</p> <p>Answer _____ (1)</p>	<div data-bbox="889 625 1268 1020" data-label="Image"> </div> <p>(b) <b>Isosceles Triangle</b></p>	

37.	<p>Daddy's gas tank is empty when he drives into the gas station. He fills his tank to <math>\frac{3}{4}</math>. Through what angle does his gas meter move?</p> <div data-bbox="430 430 576 619" data-label="Image"> </div> <p>Answer _____ (2)</p>	$\frac{3}{4} \times \frac{180}{1} = 135^\circ$	
38.	<p>The area of the shaded part of the square shown is <math>40\text{cm}^2</math>. Calculate the length of one side of the square?</p> <div data-bbox="462 997 641 1165" data-label="Image"> </div> <p>Answer _____ (3)</p>	$\frac{5}{8} = 40$ $1 = \frac{40}{1} \times \frac{8}{5}$ $\text{Area} = 64\text{cm}^2$ $\text{Side} = \sqrt{64\text{cm}^2}$ $= 8\text{cm}$	

39.	<div data-bbox="375 264 618 506" data-label="Image"> </div> <p>(a) The long hand on the clock above turns through <math>270^\circ</math>. To which number will it point?</p> <p>Answer _____ (1)</p> <p>(b) The hour hand moves from 2 to 4. Through what angle does it turn?</p> <p>Answer _____ (2)</p>	<p>(a) <math>270^\circ \div 30^\circ = 9</math> spaces  <math>\therefore</math> <b>The long hand will now point to 7</b></p> <p>(b) <math>2 \rightarrow 4 = 2</math> spaces  <math>1 \text{ space} = 30^\circ (360^\circ \div 12)</math>  <math>2 \text{ spaces} = 30^\circ \times 2</math>  <math>= 60^\circ</math></p>	
40.	<p>The incomplete pictograph below shows the number of cars belonging to four boys.</p> <div data-bbox="290 1125 367 1171" data-label="Image"> </div> <p>Represents 7 cars</p> <p>Harry </p> <p>Jerry</p> <p>Sammy </p> <p>Gray </p> <p>Altogether they have 84 cars. Complete the pictograph to show the number of cars belonging to Jerry.</p> <p>(2)</p>	<div data-bbox="889 1045 971 1092" data-label="Image"> </div> <p><math>= 7</math> cars</p> <p>Jerry = <math>84 - (9 \times 7)</math>  <math>= 84 - 63</math>  <math>= 21</math></p> <p><math>\therefore</math> </p>	

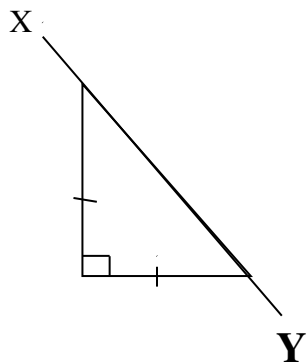
### SECTION 3

**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

No.	Items	Working Column	Marks
41.	<p>Ryan gave <math>\frac{3}{8}</math> of his money to his sister, <math>\frac{1}{2}</math> of the remainder to his brother and kept \$300.00 for himself.</p> <p>(a) What fraction of his money did Ryan give away? Answer _____ (2)</p> <p>(b) How much money did he have at first? Answer _____ (2)</p> <p>(c) How much money did he give to his brother? Answer _____ (1)</p>	<p>(a) Sister = <math>\frac{3}{8}</math>  Remainder = <math>\frac{5}{8}</math>  Brother = <math>\frac{1}{2} \times \frac{5}{8}</math>  <math>= \frac{5}{16}</math>  Total given <math>\frac{3}{8} + \frac{5}{16}</math>  <math>= \frac{11}{16}</math></p> <p>(b) <math>1 - \frac{11}{16} = \frac{5}{16}</math>  <math>\frac{5}{16} = \\$300</math>  <math>1 = \frac{300}{1} \times \frac{16}{5}</math>  <math>= \\$960</math></p> <p>(c) Brother = <math>\frac{5}{16} \times \frac{960}{1}</math>  <math>= \\$300</math></p>	
42.	<p>Two athletes walked around a circular field. The distance around the field is 0.75km.</p> <p>(a) Anil walks 3 times around the field. What distance does he cover ? Answer _____ km (2)</p> <p>(b) How many times must Peter walk around the field if he wants to cover a distance of 9km? Answer _____ times (2)</p> <p>(c) Calculate the total distance the two athletes walked. Answer _____ (1)</p>	<p>(a) Anil = <math>3 \times 0.75</math>  <math>= 2.25\text{km}</math></p> <p>(b) <math>9 \div 0.75 = 12 \text{ times}</math></p> <p>(c) Total Distance  <math>= 9 + 2.25</math>  <math>= 11.25\text{km}</math></p>	

43.	<p>Kayla buys a refrigerator marked at \$3000.00 and pays 15% VAT. She gets a 10% discount when she pays cash.</p> <p>Calculate:</p> <p>(a) the price of the refrigerator before the discount.</p> <p>Answer \$ _____ (3)</p> <p>(b) the discount on the refrigerator.</p> <p>Answer \$ _____ (1)</p> <p>(c) how much Kayla pays for the refrigerator?</p> <p>Answer \$ _____ (1)</p>	<p>(a) Before Discount  <math>= 115\% \times \\$3000</math>  <math>= \frac{115}{100} \times \frac{3000}{1}</math>  <math>= \\$3450</math></p> <p>(b) Discount  <math>= 10\% \times \\$3450</math>  <math>= \\$345</math></p> <p>(c) Paid = \$3450 - \$345  <math>= \\$3105</math></p>	
44.	<p>An aquarium holds 50L of water when full. The aquarium has a width of 50cm and a depth of 20cm.</p> <p>Calculate:</p> <p>(a) the length of the aquarium (1 litre = 1000cm<sup>3</sup>)</p> <p>Answer _____ (2)</p> <p>(b) the volume of water in cubic centimeters when the tank is <math>\frac{2}{5}</math> full.</p> <p>Answer _____ (1)</p> <p>(c) If the aquarium is to be emptied by using a jug that holds 500ml, how many times will the jug have to be filled and emptied?</p> <p>Answer _____ (2)</p>	<p>(a) Length = <math>\frac{\text{Volume}}{W \times H}</math>  <math>= \frac{50\,000}{50 \times 20}</math>  <math>= 50\text{cm}</math></p> <p>(b) Volume at <math>\frac{2}{5}</math> full  <math>= \frac{2}{5} \times \frac{50\,000}{1}</math>  <math>= 20\,000\text{ cm}^3</math></p> <p>(c) <math>50\,000 \div 500</math>  <math>= 100\text{ times}</math></p>	

45.



(a) Name the type of triangle shown above.

Answer \_\_\_\_\_ (1)

(b) Draw ONE line of symmetry on the shape.

Answer \_\_\_\_\_ (1)

(c) Name the complete shape formed if the triangle is flipped along XY.

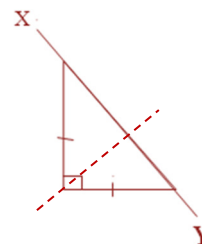
Answer \_\_\_\_\_ (1)

(d) Draw the lines of symmetry on the new shape formed.

Answer \_\_\_\_\_ (2)

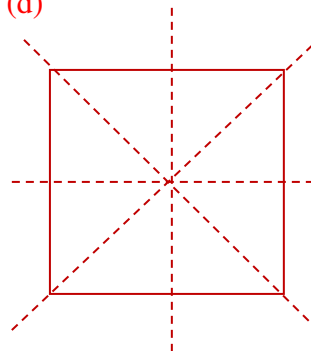
(a) **Right-angled Isosceles Triangle**

(b)



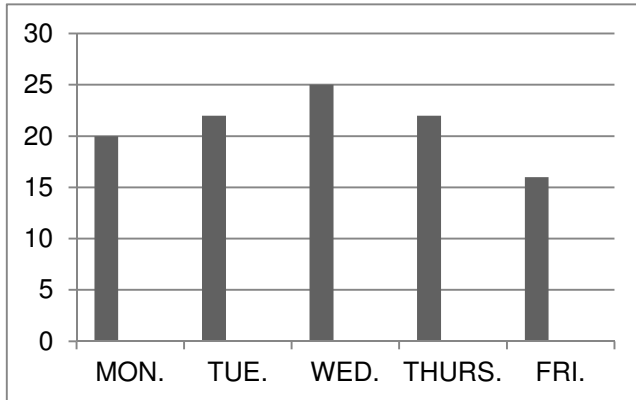
(c) **Square**

(d)



46.

The graph below shows the attendance during one week for a Standard Five class of 25 children at New Private School.



(a) **Wednesday**

(b) **Tuesday & Thursday**

(c) Average

$$\begin{aligned}
 &= (20+22+25+22+16) \div 5 \\
 &= 105 \div 5 \\
 &= \mathbf{21 \text{ students}}
 \end{aligned}$$

(a) On which day are all the children present?

Answer \_\_\_\_\_ (1)

(b) On which days were the same number of students present?

Answer \_\_\_\_\_ (1)

(c) What is the average attendance for the week?

Answer \_\_\_\_\_ (3)

**End of Test 22**



# TEST

# 23

# MATHEMATICS TEST 23

# TIME- 75 MINUTES

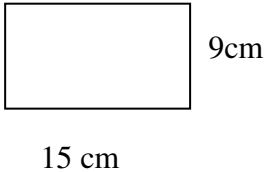
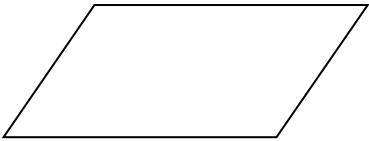
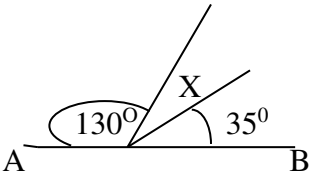
## SECTION 1

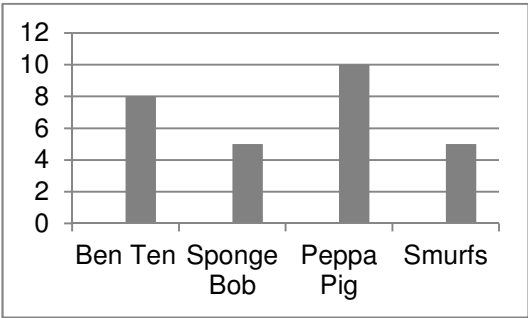
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Marks
1.	Write in words 1 267 895.  Answer _____	<b>One million, two hundred and sixty-seven thousand, eight hundred and ninety-five.</b>	
2.	Multiply 0.9 by 0.6  Answer _____	<b><math>0.9 \times 0.6 = 0.54</math></b>	
3.	How many halves are there in $3\frac{1}{2}$ ?  Answer _____	<b><math>3\frac{1}{2} = \frac{7}{2}</math> <math>\frac{7}{2} = \frac{7}{2}</math> <math>\square = 7</math></b>	
4.	Convert 0.64 to a fraction in its LOWEST terms.  Answer _____	<b><math>0.64 = \frac{64}{100}</math> <math>= \frac{16}{25}</math></b>	
5.	Subtract $8\frac{2}{3}$ from 16.  Answer _____	<b><math>16 - 8\frac{2}{3} = 7\frac{1}{3}</math></b>	

6.	$8.7 \div 0.3$  Answer _____	$8.7 \div 0.3 = 29$	
7.	If 70% of a number is 21. What is the number?  Answer _____	$70\% = 21$ $\frac{7}{10} = 21$ $1 = \frac{21}{1} \times \frac{10}{7}$ $= 30$	
8.	What PERCENT of 42 is 14?  Answer _____	$\frac{14}{42} \times \frac{100}{1} = 33\frac{1}{3}\%$	
9.	What is the value of the digit 7 in the number 5.072?  Answer _____	$\frac{7}{100}$	
10.	If Justin scored 81 out of 90 in a Grammar test. Express Justin's score as a percent.  Answer _____	$\frac{81}{90} \times \frac{100}{1} = 90\%$	

11.	<p>Mrs. Green buys copybooks to sell. For every dozen she buys, she gets 1FREE copybook. If she buys 72 copybooks, how many copybooks would she get free?</p> <p>Answer _____</p>	<p>Free = <math>72 \div 12</math> = <b>6 free copybooks</b></p>	
12.	<p>Sharon bought a chocolate cake and divided it into 16 equal parts. If Jenny eats <math>\frac{1}{4}</math> of the cake, how many slices did she eat?</p> <p>Answer _____</p>	<p><math>\frac{1}{4} \times \frac{16}{1}</math> = <b>4 slices</b></p>	
13.	<p>If Shawn bought a T-Shirt for \$27.50 and paid with a \$50.00 bill. What will be his change?</p> <p>Answer _____</p>	<p>Change = \$50.00 - \$27.50 = <b>\$22.50</b></p>	
14.	<p>Which of the following: a pineapple, a pen or an orange could have a mass of one kilogram?</p> <p>Answer _____</p>	<p><b>Pineapple</b></p>	
15.	<p>Wendy is 28cm shorter than her sister who is 156cm tall. How tall is Wendy?</p> <p>Answer _____</p>	<p>Wendy = <math>156 - 28</math> = <b>128cm</b></p>	

16.	<p>Calculate the perimeter of the shape shown below.</p>  <p>15 cm</p> <p>9cm</p> <p>Answer _____</p>	<p>Perimeter of rectangle = <math>2L + 2W</math>  <math>= (2 \times 15) + (2 \times 9)</math>  <math>= 30 + 18</math>  <math>= \mathbf{48cm}</math></p>	
17.	<p>Name the shape below.</p>  <p>Answer _____</p>	<p><b>Parallelogram</b></p>	
18.	 <p>In the above diagram AB is a straight line. What is the value of angle x?</p> <p>Answer _____</p>	<p><math>X = 180^{\circ} - (130^{\circ} + 35^{\circ})</math>  <math>= 180^{\circ} - 165^{\circ}</math>  <math>= \mathbf{15^{\circ}}</math></p>	

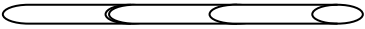
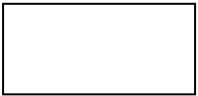
19.	<p>In an End of Term Test, Natasha's mean score for 3 tests is 80 marks. If two of her scores are 85 and 70, calculate Natasha's third score.</p> <p>Answer _____</p>	<p> <math>\text{Total} = 80 \times 3</math>  <math>= 240</math>  <math>3^{\text{rd}} \text{ Mark} = 240 - (85 + 70)</math>  <math>= 240 - 155</math>  <math>= 85</math> </p>	
20	<p>The bar chart below shows the favourite cartoon shows of the children in Infants.</p>  <p>Which show was liked the most by the Infant children?</p> <p>Answer _____</p>	<p><b>Peppa Pig</b></p>	

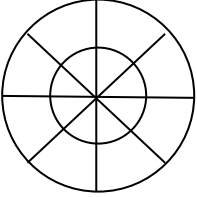
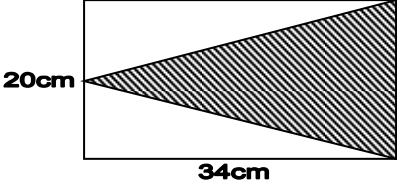
## SECTION 2

**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

21	<p>Solve: <math>448 \div 14</math></p> <p>Answer _____ (2)</p>	$448 \div 14 = 32$	
22	<p><math>4\frac{2}{5} - 2\frac{3}{10}</math></p> <p>Answer _____ (2)</p>	$4\frac{2}{5} - 2\frac{3}{10}$ $2\frac{4}{5} - 2\frac{3}{10}$ $= 2\frac{1}{10}$	
23	<p>If Sam drops water in a glass at the rate of 28 drips per minute. How many drops will be dropped into the glass after 3 minutes?</p> <p>Answer _____ (2)</p>	$1 \text{ minute} = 28 \text{ drops}$ $3 \text{ minutes} = 28 \times 3$ $= 84 \text{ drops}$	
24	<p>If <math>\frac{5}{8}</math> of Ken's money is \$65.00, how much money does Ken have in TOTAL?</p> <p>Answer _____ (2)</p>	$\frac{5}{8} = \$65$ $1 = \frac{65}{1} \times \frac{8}{5}$ $= \$104$	
25	<p>Maria spent 40% of her money on a dress 0.25 on food and saved the remainder. What fraction of her money did she save?</p> <p>Answer _____ (2)</p>	$\text{Dress} + \text{Food} = 40\% + 25\%$ $\text{Left with} = 100\% - 65\%$ $= 35\%$ $= \frac{35}{100}$ $= \frac{7}{20}$	

26	<p>Josh was given an <b>equal</b> number of \$50, \$20, \$10 and \$5 bills.</p> <p>What is the least amount of money that Josh would have?</p> <p>Answer _____ (2)</p>	<p>Least amount of money</p> <p>(1 of each bill)</p> <p>= \$50 + \$20 + \$10 + \$5 = <b>\$85</b></p>	
27	<p>Anna took a loan of \$18 000 from the bank for 3 years at 15% per year.</p> <p>(a) What is the Simple Interest Anna has to pay?</p> <p>Answer _____ (2)</p> <p>(b) How much money will Anna have to repay the bank at the end of 3 years?</p> <p>Answer _____ (1)</p>	<p>(a) Simple Interest = <math>\frac{P \times R \times T}{100}</math></p> <p>= <math>\frac{18\,000 \times 15 \times 3}{100}</math> = <b>\$8100</b></p> <p>(b) Amount = \$8100 + \$18 000 = <b>\$26 100</b></p>	
28	<p>Shania left home at 6:30 am. She took <math>1\frac{1}{2}</math> hours to reach to school.</p> <p>What time did Shania reach to school?</p> <p>Answer _____ (2)</p>	<p>6 : 30 + 1 : 30 = <b>8 : 00am</b></p>	

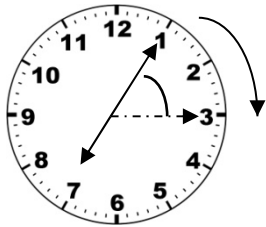
29	<p>The mass of 24 apples and some oranges is 6 kilograms. The mass of each apple is 85 grams and each orange weighs 60 grams.</p> <p>Calculate:</p> <p>a) The mass of the apples.</p> <p>Answer _____g(1)</p> <p>b) The number of oranges.</p> <p>Answer _____(2)</p>	<p>(a) 1 apple = 85g 24 apples = <math>85 \times 24</math> = <b>2040g</b></p> <p>(b) No. of oranges = <math>(6000 - 2040) \div 60</math> = <math>3960 \div 60</math> = <b>66 oranges</b></p>	
30	 <p>A piece of stick is 4.5cm long. If 8 pieces of sticks are placed side by side in a line, what would be the length?</p> <p>Answer _____ (2)</p>	<p>1 pc = 4.5cm 8 pcs = <math>4.5 \times 8</math> = <b>36cm</b></p>	
31	 <p>The length of the shape is <b>twice</b> its width.</p> <p>(a) Calculate the length of the shape.</p> <p>Answer _____cm (1)</p> <p>(b) Calculate the distance around the shape.</p> <p>Answer _____ cm (2)</p>	<p>(a) Length = <math>18 \times 2</math> = <b>36cm</b></p> <p>(b) Perimeter = <math>2L + 2W</math> = <math>(2 \times 36) + (2 \times 18)</math> = <math>72 + 36</math> = <b>108cm</b></p>	

32	<p>The wheel below has a radius of 14cm.</p>  <p>(a) What is the <b>diameter</b> of the wheel?</p> <p>Answer _____ cm. (1)</p> <p>(b) Calculate the <b>circumference</b> of the wheel.</p> <p>Answer _____ cm. (2)</p>	<p>(a) Radius = <math>2D</math>  <math>= 2 \times 14</math>  <math>= \mathbf{28cm}</math></p> <p>(b) Circumference = <math>D \times \pi</math>  <math>= \frac{28}{1} \times \frac{22}{7}</math>  <math>= \mathbf{88cm}</math></p>	
33	 <p>Calculate the area of the shaded triangle.</p> <p>Answer _____ cm<sup>2</sup>. (2)</p>	<p>Area of shaded <math>\triangle = \frac{B \times H}{2}</math>  <math>= \frac{20 \times 34}{2}</math>  <math>= \frac{340}{2}</math>  <math>= \mathbf{170cm^2}</math></p>	

34	<div data-bbox="305 233 695 443" data-label="Image"> </div> <p data-bbox="305 520 800 632">(a) What will be the height of 7 blocks if one block is placed on top of the other?</p> <p data-bbox="256 705 800 737">Answer _____ cm (1)</p> <p data-bbox="305 779 784 852">(b) If 5 blocks are placed in a straight line, what will be the length?</p> <p data-bbox="256 884 800 915">Answer _____ cm (2)</p>	<p data-bbox="837 226 1105 331">(a) Height = 4cm 7 blocks = 4 x 7 = <b>28cm</b></p> <p data-bbox="837 373 1105 478">(b) 1 length = 7cm 5 lengths = 7 x 5 = <b>35cm</b></p>	
35	<div data-bbox="269 1094 670 1367" data-label="Image"> </div> <p data-bbox="256 1440 735 1503">Jevon has two identical squares and 4 identical triangles as shown above.</p> <p data-bbox="256 1545 800 1577">Arrange the shapes above to form a square.</p> <p data-bbox="773 1619 800 1650">(3)</p>	<div data-bbox="902 1167 1130 1388" data-label="Image"> </div>	

36

The time shown on the clock below is 7:05 am.

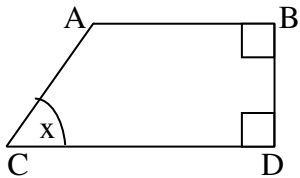


Through how many degrees would the long hand move when it is 7:15 am?

Answer \_\_\_\_\_ (3)

1 space =  $30^{\circ}$   
 2 spaces =  $30^{\circ} \times 2$   
 =  $60^{\circ}$

37



(a) Name the shape ABCD above.

Answer \_\_\_\_\_

(1)

(b) Which angle is an acute angle?

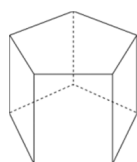
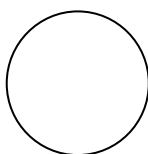
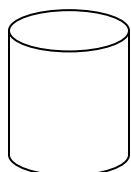
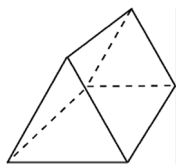
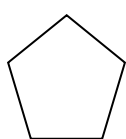
Answer \_\_\_\_\_

(1)

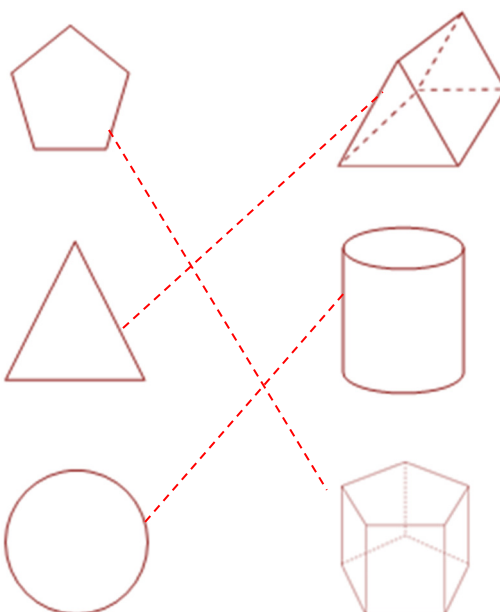
(a) **Trapezium**

(b) **x**

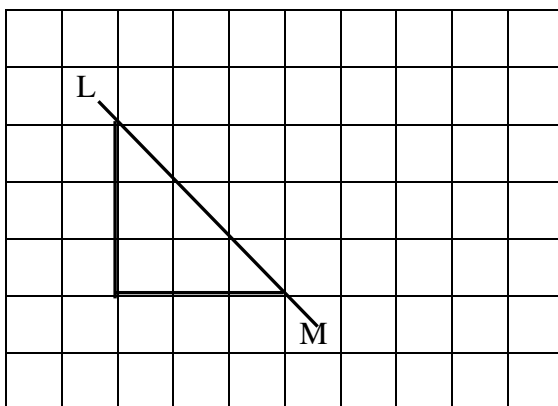
38 Match the flat shape with a face on the solids.



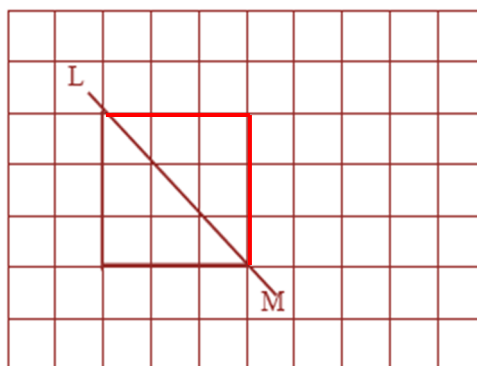
(3)



39 Draw the new position of the triangle after it is flipped about the line LM.



(3)



40

The table below shows the money that Sonia saved for one month.

WEEK	AMOUNT SAVED
Week 1	\$12.75
Week 2	\$ 11.65
Week 3	\$13.82
Week 4	\$15.78

Calculate her mean savings per week

Answer \_\_\_\_\_ (3)

**Mean**

$$= \frac{\$12.75 + \$11.65 + \$13.82 + \$15.78}{4}$$

$$= \$54 \div 4$$

$$= \$ \mathbf{13.50}$$

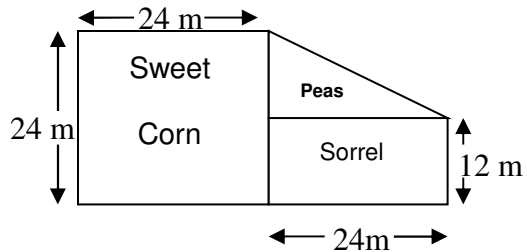
### SECTION 3

**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

<p>41.</p>	<p>There are 250 workers at a bakery 40% of the workers are men and the rest are women. 10% of the men are equipment managers.</p> <p>(a) How many equipment managers are there?</p> <p>Answer: _____ (2)</p> <p>(b) If each equipment manager is responsible for 6 machines, how many machines are there in the bakery?</p> <p>Answer: _____ machines (1)</p> <p>(c) If HALF of the women at the bakery worked on the breadline, how many women worked on the breadline?</p> <p>Answer: _____ women (2)</p>	<p>(a) Men = <math>40\% \times 250</math>  <math>= 0.4 \times 250</math>  <math>= 100</math> men  Equipment managers  <math>= 100 \times 10\%</math>  <math>= 100 \times 0.1</math>  <math>= 10</math> <b>equipment managers</b></p> <p>(b) Machines = <math>10 \times 6</math>  <math>= 60</math> <b>machines</b></p> <p>(c) Women = <math>250 - 100</math>  <math>= 150</math>  Breadline = <math>150 \div 2</math>  <math>= 75</math> <b>women</b></p>	
<p>42.</p>	<p>There are 135 vehicles in a parking lot. <math>33\frac{1}{3}\%</math> are trucks, <math>\frac{2}{5}</math> of the remainder are vans and the rest of the vehicles are cars. Calculate:</p> <p>(a) how many trucks there are in the parking lot.</p> <p>Answer: _____ trucks (1)</p> <p>(b) the number of vans parked there.</p> <p>Answer: _____ vans (2)</p> <p>(c) the number of cars parked in the lot?</p> <p>Answer: _____ cars (2)</p>	<p>Trucks = <math>33\frac{1}{3}\% \equiv \frac{1}{3}</math></p> <p>(a) Trucks = <math>\frac{1}{3} \times \frac{135}{1}</math>  <math>= 45</math> <b>trucks</b></p> <p>(b) Vans = <math>\frac{2}{5} \times (135 - 45)</math>  <math>= \frac{2}{5} \times \frac{90}{1}</math>  <math>= 36</math> <b>vans</b></p> <p>(c) Cars = <math>135 - (45 + 36)</math>  <math>= 135 - 81</math>  <math>= 54</math> <b>cars</b></p>	

43.

A farmer planted peas, sorrel and sweet corn in a garden plot as shown below.



Use the information from the diagram to:

- (a) Calculate the area planted in sweet corn

Answer: \_\_\_\_\_(1)

- (b) What area is planted in peas

Answer: \_\_\_\_\_(2)

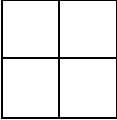

- (c) If ONLY the plots on which sweet corn and sorrel are planted are to be fenced, how many metres of wire fence are needed?

Answer: \_\_\_\_\_(2)

$$\begin{aligned} \text{(a) Area planted in sweet corn} \\ &= S \times S \\ &= 24 \times 24 \\ &= 576\text{m}^2 \end{aligned}$$

$$\begin{aligned} \text{(b) Area of triangle} &= \frac{B \times H}{2} \\ &= \frac{24 \times 12}{2} \\ &= \frac{288}{2} \\ &= 144\text{m}^2 \end{aligned}$$

$$\begin{aligned} \text{(c) Perimeter} \\ &= 24+24+24+24+12+24+12 \\ &= 144 \text{ m} \end{aligned}$$





44.	<p>Robert and Risa used each of their four identical squares of side 5 cm to make their shapes as shown below.</p> <div style="display: flex; align-items: center; justify-content: space-around;"> <div style="text-align: center;"> <p>5cm</p>  <p>Robert</p> </div> <div style="text-align: center;"> <p>5 cm</p>  <p>Risa</p> </div> </div> <p>(a) What is the perimeter of Robert's shape?</p> <p>Answer: _____ cm (2)</p> <p>(b) Whose shape has the greater perimeter?</p> <p>Answer: _____ (1)</p> <p>(c) What is the difference in perimeter in the two shapes?</p> <p>Answer: _____ (1)</p> <p>(d) What is the difference in the AREA of both shapes?</p> <p>Answer: _____ (1)</p>	<p>(a) Perimeter = <math>10 \times 4</math> = <b>40cm</b></p> <p>(b) Perimeter of Risa's shape = <math>5 \times 10</math> = 50cm</p> <p><b>Risa's shape has the greater perimeter (50cm)</b></p> <p>(c) Difference = <math>50 - 40</math> = <b>10cm</b></p> <p>(d) Area of Robert's shape = <math>S \times S</math> = <math>10 \times 10</math> = <math>100\text{cm}^2</math></p> <p>Area of Risa's shape = <math>L \times W</math> = <math>20 \times 5</math> = <math>100\text{cm}^2</math></p> <p>Difference = <math>100\text{cm}^2 - 100\text{cm}^2</math> = <b>0cm<sup>2</sup></b></p>	
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45.	<p>A book has 200 pages. There are 8 chapters in the book.</p> <p>a) Calculate the mean number of pages in each chapter of the book.</p> <p>Answer _____ (1)</p> <p>b) The 5<sup>th</sup> chapter of the book begins on page 94 and ends on page 118. How many pages does chapter 5 have?</p> <p>Answer _____ (2)</p> <p>c) What fraction of the entire book is chapter 5?</p> <p>Answer _____ (2)</p>	<p>(a) Mean number of pages  <math>= 200 \div 8</math>  <math>= \mathbf{25 \text{ pages}}</math></p> <p>(b) <math>118 - 94 = 24</math>  <math>24 + 1 = \mathbf{25 \text{ pages}}</math></p> <p>(c) Chapter <math>= \frac{25}{200}</math>  <math>= \frac{\mathbf{1}}{\mathbf{8}}</math></p>	
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46.

The pictograph below shows the number of connections done by T&TEC in a new housing development.

**No. of Connections Made**

Sun Avenue	
Honey Drive	
Old Street	
Moonlight Alley	



= 30 connections

- a) How many MORE connections were done in Sun Avenue than in Honey Drive?

Answer \_\_\_\_\_ (1)

- b) What is the PERCENTAGE of connections is on Old Street?

Answer \_\_\_\_\_ (2)

- c) Calculate the MEAN number of connections per street in the new housing development.

Answer \_\_\_\_\_ (2)

(a)  $2 \times 30$   
= **60 more connections**

(b) Old street =  $\frac{3}{12} \times \frac{100}{1}$   
  
= **25%**

(c) Total =  $12 \times 30$   
= 360

Mean =  $360 \div 4$   
= **90 connections**

END OF TEST 23

# TEST

# 24

# MATHEMATICS TEST 24

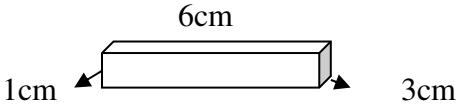

# TIME- 75 MINUTES

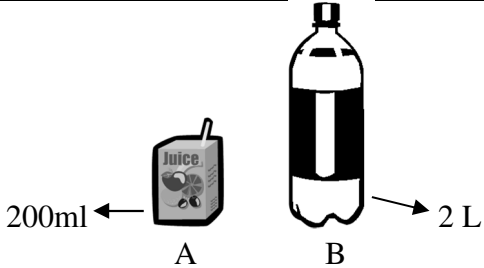
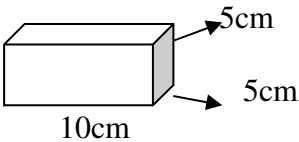
## SECTION 1

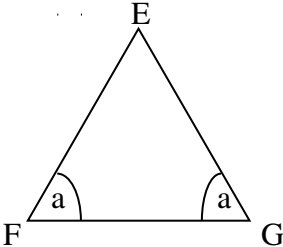
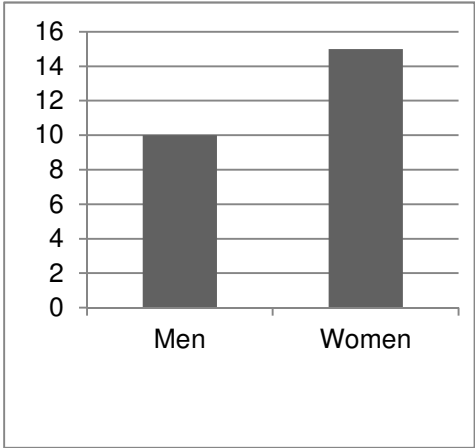
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Mark
1.	Write in figures two hundred and nine thousand and forty five.  Answer _____	<b>209 045</b>	
2.	<div style="border: 1px solid black; padding: 5px; display: inline-block;">0.37, 0.298, 0.111, 0.8</div> Which of the above shows the largest value?  Answer _____	<b>0.8</b>	
3.	In a test of forty five problems, Lana got 36 correct. What percent did she get correct?  Answer _____	$\frac{36}{45} \times \frac{100}{1}$ $= 80\%$	
4.	What % of 54 is 36?  Answer _____	$\frac{36}{54} \times \frac{100}{1}$ $= 66\frac{2}{3}\%$	
5.	What is the sum of 4.17, 1.1 and 2.19?  Answer _____	<b>7.46</b>	

6.	<p>Calculate :</p> $7\frac{7}{10} - 2\frac{1}{2}$ <p>Answer _____</p>	$7\frac{7}{10} - 2\frac{1}{2}$ $5\frac{7-5}{10}$ $= 5\frac{1}{5}$	
7.	<p>How much change from \$30.00 should Pablo receive if he bought a sandwich for \$12.50 and a cake for \$2.50?</p> <p>Answer: \$ _____</p>	<p>Change = \$30 - (\$12.50 + \$2.50)</p> <p>= \$30 - \$15</p> <p>= <b>\$15</b></p>	
8.	<p>Janice pressed the following digits on a cash register. The display was as shown:</p> <div style="border: 1px solid black; padding: 2px; display: inline-block;">\$6542.18</div> <p>Write the display in words.</p> <p>Answer _____</p>	<p><b>Six thousand five hundred and forty-two dollars and eighteen cents.</b></p>	
9.	<p>What is 70192 to the nearest hundred?</p> <p>Answer _____</p>	<p>70192 <math>\approx</math> <b>70200</b></p>	
10.	<p>If the distance around a square is 32cm, what is the area?</p> <p>Answer _____ cm<sup>2</sup></p>	<p>Perimeter = 32cm</p> <p>Side = 32 <math>\div</math> 4</p> <p>= 8cm</p> <p>Area of square = S x S</p> <p>= 8 x 8</p> <p>= <b>64cm<sup>2</sup></b></p>	

11.	<p>Phillip left home at 7:35 a.m. He reached to school forty minutes later. At what time did Phillip reach to school?</p> <p>Answer _____ a.m.</p>	$7:35 + 0:40$ $= 8:15\text{am}$	
12.	<p>What is the volume of the cuboid shown below?</p>  <p>Answer _____ cm<sup>3</sup></p>	$\text{Volume of cuboid} = L \times W \times H$ $= 6 \times 3 \times 1$ $= 18\text{cm}^3$	
13.	 <p>The clock above is 5 minutes fast. To which number should the SHORT HAND be pointing?</p> <p>Answer _____</p>	$11$	

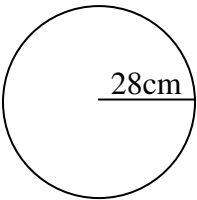

14.	 <p>How many similar juice boxes as shown in Box A can be filled using Container B?</p> <p>Answer _____</p>	$2\text{L} \div 200\text{ml}$ $= 2000 \div 200$ $= \mathbf{10 \text{ juice boxes}}$	
15.	<p>Five cakes were cut into eighths for a party. Each child got 1 slice and at the end <math>\frac{1}{2}</math> of a cake remained. How many children were at the party?</p> <p>Answer _____ children</p>	$1 \text{ cake} = 8 \text{ slices}$ $5 \text{ cakes} = 8 \times 5$ $= 40$ $\text{Remained} = 4 \text{ slices } (\frac{1}{2} \times 8)$ $\text{No. of children} = 40 - 4$ $= \mathbf{36 \text{ children}}$	
16.	<p>Telephone Company B charges 65 cents for a 2 minute call, while Telephone Company D charges \$1.50 for a 3 minute call. Which Company charges the cheaper rate?</p> <p>Answer: _____</p>	$\text{Tel. Co. B} = \$0.65 \div 2$ $= \$0.32$ $\text{Tel. Co. D} = \$1.50 \div 3$ $= \$0.50$ <p><b>Telephone Company B charges the cheaper rate</b></p>	
17.	 <p>How many square faces are there in the solid above?</p> <p>Answer: _____</p>	<p><b>2 square faces</b></p>	

18.	<div></div> <p>In the triangle above, the two angles labelled 'a' are equal.</p> <p>Which two sides of the triangle are equal?</p> <p>Answer _____</p>	<b>EF and EG</b>	
19.	<p>The bar graph below shows the number of men and women teaching at a school.</p> <div></div> <p>How many teachers are there on staff?</p> <p>Answer _____</p>	<b>Total = 10 + 15 = 25 teachers</b>	
20.	<div><div>12, 16, 16, 17, 16, 15, 17</div><p>What is the MODE of the numbers above?</p><p>Answer _____</p></div>	<b>Mode = 16</b>	

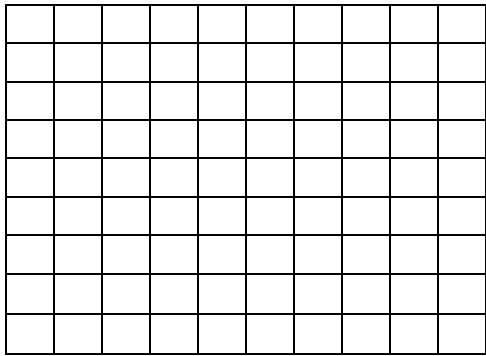
## SECTION 2

**Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.**

No .	Items	Working Column	Mark
21.	<p>A football team scored 274 goals in one season and 232 in the second season.</p> <p>a) How many goals were scored in the two seasons?</p> <p>Answer: _____(1)</p> <p>b) How many MORE goals were scored in season one than in season two?</p> <p>Answer: _____(1)</p>	<p>(a) Season 1 = 274 Season 2 = <u>232</u> Total = <u>506</u></p> <p>(b) Difference = <math>274 - 232</math> = <b>42</b></p>	
22.	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <math>\frac{11}{20}, \frac{7}{10}, \frac{3}{5}, \frac{1}{2}</math> </div> <p>a) Arrange the fractions above in order, starting with the SMALLEST.</p> <p>Answer: _____(1)</p> <p>b) What is the difference between the largest and the smallest fractions?</p> <p>Answer _____(2)</p>	<p style="text-align: center;"><math>\frac{11}{20}, \frac{7}{10}, \frac{3}{5}, \frac{1}{2}</math></p> <p>(a) <math display="block">\frac{11}{20}, \frac{14}{20}, \frac{12}{20}, \frac{10}{20}</math> = <math>\frac{1}{2}, \frac{11}{20}, \frac{3}{5}, \frac{7}{10}</math></p> <p>(b) <math display="block">\frac{7}{10} - \frac{1}{2}</math> <math display="block">\frac{7}{10} - \frac{5}{10}</math> <math display="block">\frac{10}{10}</math> <math display="block">= \frac{1}{5}</math></p>	
23.	<p>One quarter of the sum of two numbers is 20. One of the numbers is 54, what is the other number?</p> <p>Answer _____(3)</p>	<p><math>\frac{1}{4} = 20</math> <math>1 = 20 \times 4</math> = 80 Other Number = <math>80 - 54</math> = <b>26</b></p>	

24.	<p>The circle below has a radius of 28 cm. Calculate:</p>  <p>a) the length of the LONGEST line that could be drawn in the circle.</p> <p>Answer: _____ (1)</p> <p>b) the circumference of the circle.</p> <p>Answer _____ (2)</p>	<p>(a) Longest line = diameter Diameter = <math>28 \times 2</math> <b>= 56cm</b></p> <p>(b) Circumference = <math>D \times \pi</math> <math>= \frac{56}{1} \times \frac{22}{7}</math> <b>= 176cm</b></p>	
25.	 <p>Ravi bought a car marked at \$15000.00 at a sale where a discount of 15% is given. Calculate how much Ravi paid for the car.</p> <p>Answer:\$ _____ (3)</p>	<p>S.P = 100% Discount = 15%</p> <p>Paid = 85% (100% - 15%) <math>= \frac{85}{100} \times \frac{15000}{1}</math> <b>= \$12 750</b></p>	
26.	<p>Round off the product of 5.8 and 2.3 to the nearest whole number.</p> <p>Answer: _____ (2)</p>	<p><math>5.8 \times 2.3</math></p> $  \begin{array}{r}  5.8 \times \\  \underline{2.3} \\  174 \phantom{+} \\  \underline{1160} \\  1334  \end{array}  $ <p><math>13.34 \approx 13</math></p>	

27.



1 cm grid

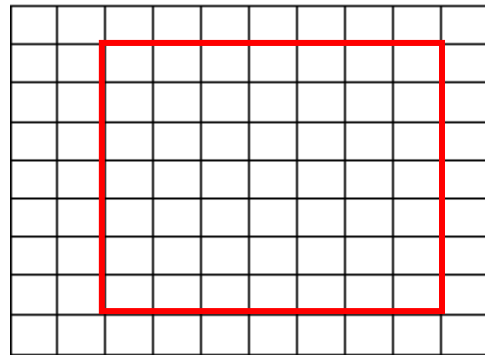
- a) On the grid above, draw a square with the area of  $49\text{cm}^2$

(1)

- b) What is the perimeter of the square?

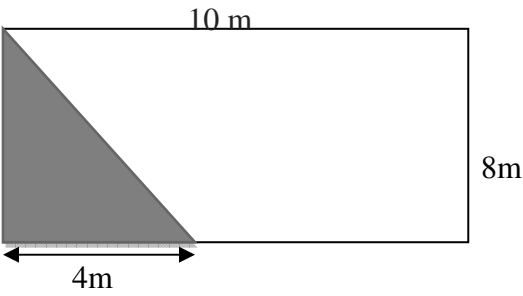
Answer \_\_\_\_\_

(1)

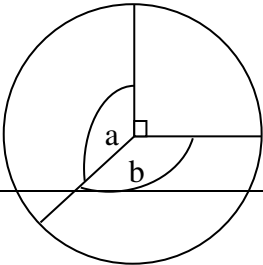


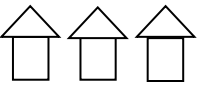
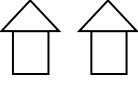

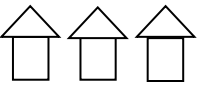
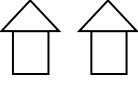




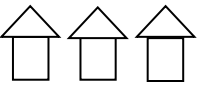
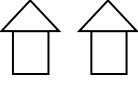

1 cm grid

$$\begin{aligned} \text{(c) Perimeter of square} &= S \times 4 \\ &= 7 \times 4 \\ &= \mathbf{28\text{cm}} \end{aligned}$$

28.	<p>The cost of a flash drive is \$64.25. Adita had \$49.50. If she saves \$10.50 in one week, how much MORE must she save to buy the flash drive?</p> <p>Answer: _____ (2)</p>	<p>Adita needs to save  <math>= \\$64.25 - (\\$49.50 + \\$10.50)</math>  <math>= \\$64.25 - \\$60.00</math>  <math>= \\$64.25 - \\$60.00</math>  <math>= \\$4.25</math></p>	
29.	 <p>The diagram above represents Mrs. Smith's rectangular backyard. She placed a triangular pond to one side of the yard. The remaining area is covered with grass.</p> <p>a) What is the area of the pond?</p> <p>Answer: _____ (1)</p> <p>b) What area of the backyard is covered with grass?</p> <p>Answer _____ (2)</p>	<p>(a) Area of triangle = <math>\frac{B \times H}{2}</math>  <math>= \frac{4 \times 8}{2}</math>  <math>= 16\text{cm}^2</math></p> <p>(b) Grass = <math>(10\text{cm} \times 8\text{cm}) - 16\text{cm}^2</math>  <math>= 80\text{cm}^2 - 16\text{cm}^2</math>  <math>= 64\text{cm}^2</math></p>	

30.	<p>A discount of 20% was given on a couch set during a sale.</p> <p>a) If Mike paid \$5040 for the couch. Calculate the original price of the set.</p> <p>Answer: _____(2)</p> <p>b) Calculate the amount of the discount given.</p> <p>Answer: _____(1)</p>	<p>(a) Paid = 80% or <math>\frac{4}{5}</math></p> $\frac{4}{5} = \$5040$ $1 = \frac{5040}{1} \times \frac{5}{4}$ $= \$6300$ <p>(b) Discount = \$6300 - \$5040</p> $= \$1260$	
31.	<p>Karla left out 20% of the questions on her test paper. There were 75 questions on the paper.</p> <p>a) Calculate the number of questions left out.</p> <p>Answer : _____(1)</p> <p>b) Each question answered correctly is awarded one mark. If Karla got 90% of those she answered correctly, how many marks did she score on the test?</p> <p>Answer: _____(2)</p>	<p>(a) No. of questions left out</p> $= 20\% \times 75$ $= 0.2 \times 75$ $= 15 \text{ questions}$ <p>(b) Karla did = 75 – 15</p> $= 60 \text{ questions}$ <p>Correct = 90% x 60</p> $= 0.9 \times 60$ $= 54 \text{ marks}$	
32.	<p>A vendor bought 120 mangoes for \$72.00 and sold them at 5 for \$4.00. Calculate his profit on the transaction?</p> <p>Answer _____ (3)</p>	<p>C.P = \$72</p> $S.P = (120 \div 5) \times \$4$ $= 24 \times \$4$ $= \$96$ <p>Profit = \$96 - \$72</p> $= \$24$	

33.	<p>Calculate in metres:</p> <div> <div>m</div> <div>cm</div> <div>30</div> <div>4</div> <div>- 14</div> <div>96</div> <div>_____</div> </div> <p>Answer: _____(2)</p>	<div> <div>m</div> <div>cm</div> <div>29</div> <div>104</div> <div><del>30</del></div> <div><del>4</del> -</div> <div>14</div> <div>96</div> <div>15</div> <div>8</div> </div> <p>= <b>15.08m</b></p>	
34.	<p>Melanie has three fifty dollar bills, five ten dollar bills, six five dollar bills and thirteen one dollar bills. The remaining notes are twenty dollar bills.</p> <p>If she has \$323.00 in total, how many twenty dollar bills does Melanie have?</p> <p>Answer: _____(2)</p>	<p> <math>3 \times \\$50 = \\$150</math>  <math>5 \times \\$10 = \\$50</math>  <math>6 \times \\$5 = \\$30</math>  <math>13 \times \\$1 = \\$13</math>  <math>\text{Total} = \\$150 + \\$50 + \\$30 + \\$13</math>  <math>= \\$243</math>  <math>\text{Balance} = \\$323 - \\$243</math>  <math>= \\$80 \div 20</math>  <math>= \mathbf{4 -- \\$20 \text{ bills}}</math> </p>	
35.	<div> <div> <b>LOVELY BAY RESORT</b>  <b>Mon- Thur = \$320 per night</b>  <b>Fri- Sun = \$420 per night</b> </div> <p>Mr. Mohammed and his family stayed at Lovely Bay Resort from Wednesday to Monday.</p> <p>Calculate how much they spent in total, if they also rented four kayaks on Sunday at a cost of \$30.00 each.</p> <p>Answer: \$ _____(3)</p> </div>	<p> <b>Wednesday &amp; Thursday &amp; Monday</b>  <math>= \\$320 \times 3</math>  <math>= \\$960</math>    <b>Friday + Saturday + Sunday</b>  <math>= \\$420 \times 3</math>  <math>= \\$1260</math>    <b>4 Kayaks = \$30 x 4</b>  <math>= \\$120</math>    <b>Total = \$960 + \$1260 + \$120</b>  <math>= \mathbf{\\$2340}</math> </p>	
36.		<p> <math>a + b + 90^0 = 360^0</math>  <math>a + b = 360^0 - 90^0</math>  <math>a + b = 270^0</math>  <math>b = 270^0 \div 2</math>  <math>b = \mathbf{135^0}</math> </p>	

	<p>If angle <b>a</b> is equal to angle <b>b</b>, calculate the size of the angle formed at <b>b</b>.</p> <p>Answer:_____ (2)</p>														
37.	<p>Complete the table below to show the properties of two solids.</p> <table><tr><th>Solids</th><th># of faces</th><th># of Edges</th><th># of Vertices</th></tr><tr><td>Cuboid</td><td>_____</td><td>12</td><td>8</td></tr><tr><td>_____</td><td>6 square</td><td>12</td><td>8</td></tr></table> <p>(2)</p>	Solids	# of faces	# of Edges	# of Vertices	Cuboid	_____	12	8	_____	6 square	12	8	<p>Cuboid = <b>6 faces</b></p> <p><b>Cube</b></p>	
Solids	# of faces	# of Edges	# of Vertices												
Cuboid	_____	12	8												
_____	6 square	12	8												
38.	<p>The pictograph shows the number of houses in four different villages of a country.</p> <table><tr><td>VILLAGE 1</td><td></td></tr><tr><td>VILLAGE 2</td><td></td></tr><tr><td>VILLAGE 3</td><td></td></tr><tr><td>VILLAGE 4</td><td></td></tr></table>	VILLAGE 1		VILLAGE 2		VILLAGE 3		VILLAGE 4		<p> = 150</p> <p>8  = 150 x 8 = 1200</p> <p>Village 3 = 1800 – 1200 = <b>600</b> = 600 ÷ 150 = 4</p> <p></p>					
VILLAGE 1															
VILLAGE 2															
VILLAGE 3															
VILLAGE 4															

	<div data-bbox="344 239 410 321" data-label="Image"></div> <p>Represents 150 houses.</p> <p>There are a total of 1800 houses in the four villages.</p> <p>a) How many houses are there in Village 3? Answer: _____(1)</p> <p>b) How many houses are there altogether in Villages 2 and 4? Answer: _____(1)</p> <p>c) What is the average number of houses in the country? Answer: _____(1)</p>	<p>(b) Village 2 and 4 = 5 x 150 = <b>750 houses</b></p> <p>(c) Average = <math>1800 \div 4</math> = <b>450</b></p>	
39.	<div data-bbox="318 1041 431 1262" data-label="Image"></div> <p>(a) What is the name of the solid shown above? Answer: _____(1)</p> <p>(b) Draw the net to show the solid above.</p> <div data-bbox="321 1635 721 1906" data-label="Image"></div>	<p>(a) <b>Cylinder</b></p> <p>(b)</p> <div data-bbox="933 1226 1192 1526" data-label="Image"></div>	

	(1)													
40.	<p>The incomplete tally chart shows the favourite food of Standard five pupils.</p> <table border="1"><thead><tr><th>FOOD</th><th>TALLY</th><th>FREQUENCY</th></tr></thead><tbody><tr><td>K.F.C</td><td>        </td><td>13</td></tr><tr><td>Pizza</td><td>   </td><td>3</td></tr><tr><td>Roti</td><td></td><td>12</td></tr></tbody></table> <p>a) Draw the tally for the number of students who like roti.</p> <p>(1)</p> <p>b) How many children are in this Standard 5?</p> <p>Answer: _____(1)</p>	FOOD	TALLY	FREQUENCY	K.F.C		13	Pizza		3	Roti		12	<p>(a) <b>         11</b></p> <p>(b) <b>13 + 3 + 12 = 28 students</b></p>
FOOD	TALLY	FREQUENCY												
K.F.C		13												
Pizza		3												
Roti		12												

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### SECTION 3


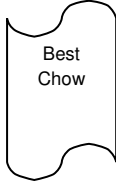
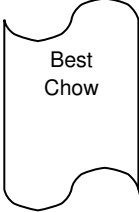
**Each question is worth 5 marks. Answer ALL questions. Show ALL working in the Working Column.**

<p>41. At a show, 40% of the audience consisted of men, 25% women and there were 140 children.</p> <p>(a) How many persons attended the show?</p> <p>Answer _____ (3)</p> <p>(b) How many more men than women were there at the show?</p> <p>Answer _____ (2)</p>	<p>(a) <math>M + W = 40\% + 25\%</math>  <math>= 65\%</math>  <math>\text{Children} = 100\% - 65\%</math>  <math>= 35\%</math></p> $\frac{35}{100} = \frac{7}{20}$ $\frac{7}{20} = 140$ $1 = \frac{140}{1} \times \frac{20}{7}$ $= \mathbf{400 \text{ persons}}$ <p>(b) <math>\text{Men} - \text{Women} = 40\% - 25\%</math>  <math>= 15\%</math></p> $\frac{15}{100} \times \frac{400}{1} = \mathbf{60 \text{ more men}}$	
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42.	<p>A decimal number is printed on four of the five cards shown below.</p> <div style="display: flex; justify-content: space-around; align-items: center; margin: 10px 0;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">A 2.5</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">B 4.9</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">C 1.6</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">D 3.6</div> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">E</div> </div> <p>a) Arrange the four printed cards in order of size, starting with the smallest.</p> <p>Answer _____ (1)</p> <p>b) Using the answer from part (a), what number should be printed on the fifth card?</p> <p>Answer _____ (2)</p> <p>c) Which THREE of the five cards will give a total of 11?</p> <p>Answer _____ (2)</p>	<p>(a) <b>1.6 2.5 3.6 4.9</b></p> <p>(b) <b>6.4</b></p> <p>(c) <b>2.5 3.6 4.9</b></p>	
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43.	<p>Two pieces of wire are used separately to make a circle and a square.</p> <p>If the diameter of the circle is 21cm. Calculate:</p> <p>(a) Its circumference.</p> <p>Answer _____ (2)</p> <p>(b) The length of one side of the square.</p> <p>Answer _____ (1)</p> <p>(c) The area of the square.</p> <p>Answer _____ (2)</p>	<p>(a) Circumference = <math>D \times \pi</math>  <math>= \frac{21}{1} \times \frac{22}{7}</math>  <b>= 66cm</b></p> <p>(b) Side of square = <math>66 \div 4</math>  <b>= 16.5cm</b></p> <p>(c) Area of square = <math>S \times S</math>  <math>= 16.5 \times 16.5</math>  <b>= 272.25cm<sup>2</sup></b></p>	
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44. Dog chow is sold in the three sizes shown below.

S	M	L
		
150g \$ _____	300g \$ 10.00	_____ g \$15.00

Packets are priced in proportion to the mass available.

- a) What would be the mass of Pack L?

Answer \_\_\_\_\_ (1)

- b) What would be the price of Pack S?

Answer \_\_\_\_\_ (1)

- c) What is the combined weight of the three packs in kilograms?

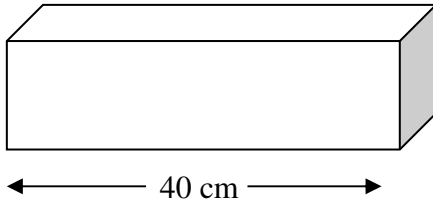
Answer \_\_\_\_\_ kg (3)

$$\begin{aligned} \text{(a) } 300\text{g} &= \$10 \\ 150\text{g} &= \$10 \div 2 \\ &= \$5 \\ \text{Packet L} &= 300 + 150 \\ &= \mathbf{450\text{g}} \end{aligned}$$

$$\begin{aligned} \text{(b) Packet S} &= \$10 \div 2 \\ &= \mathbf{\$5.00} \end{aligned}$$

$$\begin{aligned} \text{(c) } 150 + 300 + 450 &= 900\text{g} \\ 900 \div 1000 &= \mathbf{0.9\text{kg}} \end{aligned}$$

45. The diagram shows a cuboid with 2 square faces.



- a) How many faces are rectangular?

Answer \_\_\_\_\_ (1)

- b) How many edges have a length of 40cm?

Answer \_\_\_\_\_ (1)

- c) The volume of the cuboid is  $80\text{cm}^3$ .  
It is cut into identical cuboids each of volume  $10\text{cm}^3$ .  
How many smaller cuboids can be obtained?

Answer \_\_\_\_\_ (1)

- d) What is the length of EACH smaller cuboid?

Answer \_\_\_\_\_ (2)

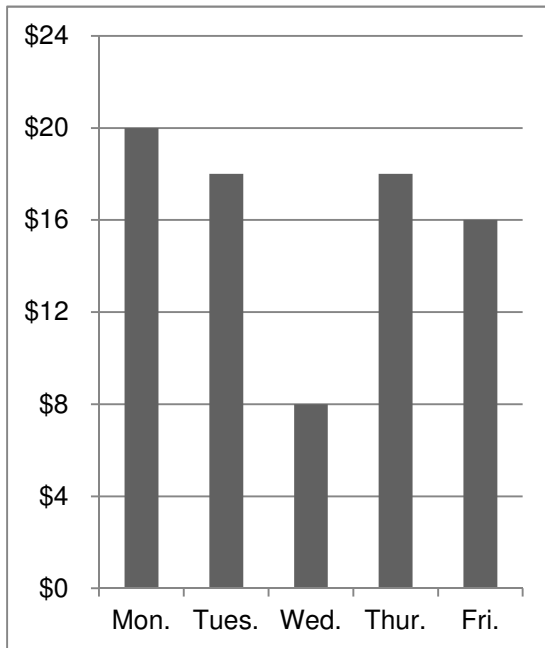
(a) **4 rectangular faces**

(b) **4 edges have a length of 40cm**

(c)  $80\text{cm}^3 \div 10\text{cm}^3$   
**= 8 smaller cuboids**

(d)  $40\text{cm} \div 8 = \mathbf{5\text{cm}}$

46. The bar graph below shows how Stacy spent her daily allowance of \$20.00.



- (a) Which day did Stacy spend all her allowance?

Answer \_\_\_\_\_ (1)

- (b) Stacy saved the money that she did not spend. On which day did she save the most money?

Answer \_\_\_\_\_ (2)

- (c) How much did she save in all for the week?

Answer \_\_\_\_\_ (2)

(a) **Monday**

(b) **Wednesday**

(c) Tues = \$2  
Wed. = \$12  
Thur. = \$2  
Fri. = \$4

$$\text{Total Saved} = 2 + 12 + 2 + 4 = \$20$$

**END OF TEST 24**