



MATHEMATICS TEST 1


TIME- 75 MINUTES

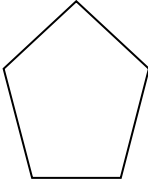
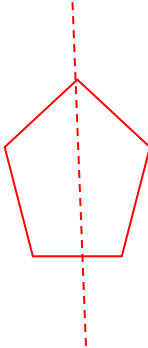
SECTION 1

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




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


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 = 3 x 7 = 28 cars 4 weeks = 28 x 4 = 112 cars</p> <p>112cars</p>	
7.	<p>Which of the two sacks has the lighter mass?</p>  <p>1500g 2.5 kg</p> <p>Answer: _____</p>	<p>2.5kg = 2500g</p> <p>Therefore Flour is lighter than Rice</p> <p>Flour</p>	
8.	 <p>Was \$599 Now \$485</p> <p>Calculate the discount on the price of the bicycle.</p> <p>Answer: _____</p>	<p>Discount = \$ 599 - \$485</p> <p>= \$114</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>6 : 25 + : 45 6 : 70 + 1 : - 60 7 : 10 pm</p> <p>7:10pm</p>	

10.	<p>The area of a square is 64cm^2. What is the length of ONE side?</p> <p>Answer : _____</p>	<p>Area of Sq. = 64cm^2</p> <p>Side = $\sqrt{64\text{cm}^2}$</p> <p>= 8cm</p>	
11.	<p>What is the name of the solid below?</p>  <p>Answer: _____</p>	<p>Cylinder</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>3 wickets</p>	
13.	<p>What is the least number of bills Sam can have if he has \$37.00?</p> <p>Answer: _____</p>	<p>1 x \$ 20 = \$ 20 1 x \$ 10 = \$ 10 1 x \$ 5 = \$ 5 2 x \$ 1 = \$ 2 5 bills = \$ 37</p> <p>5 bills</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 = \$320 - \$40 = \$ 280</p> <p>\$ 280</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 = $20 + 15 + 10$ $= 45$</p> <p>Each friend gets = $45 \div 3$ $= 15$</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>$462 + \square + 540 = 4811$ $= 4811 - (462 + 540)$ $= 3809$</p> <p style="text-align: center;">8</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	

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

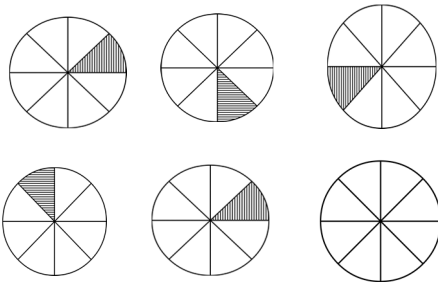
Answer: _____

Does Not Prefer = 6

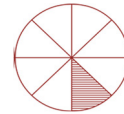


Therefore 6×2
= 12

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.



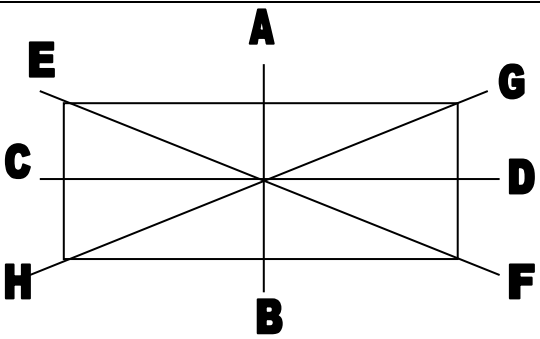
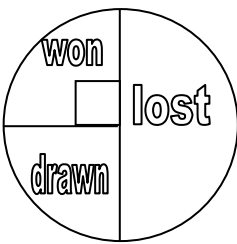
The time on the clock is 15 minutes fast. Write the correct time in digital notation.

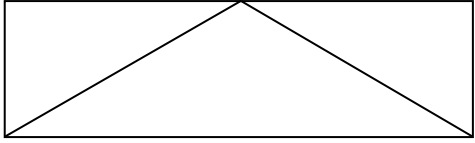
Answer: _____

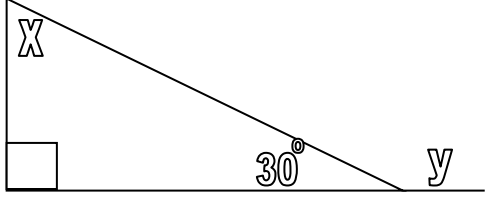
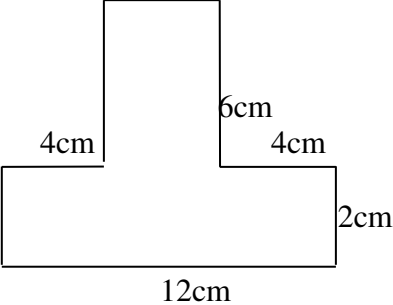
$$\begin{array}{r} 2 : 40 \\ - \quad : 15 \\ \hline 2 : 25 \end{array}$$

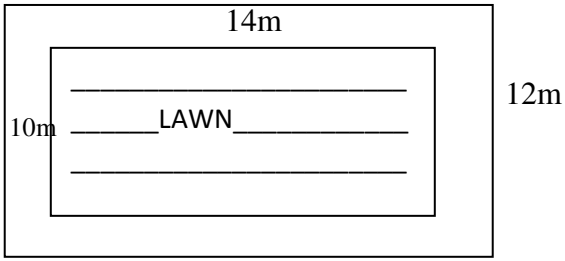
SECTION 2

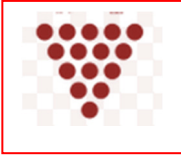
Each question is worth either 2 or 3 marks. Answer ALL questions. Show ALL working in the Working Column.

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

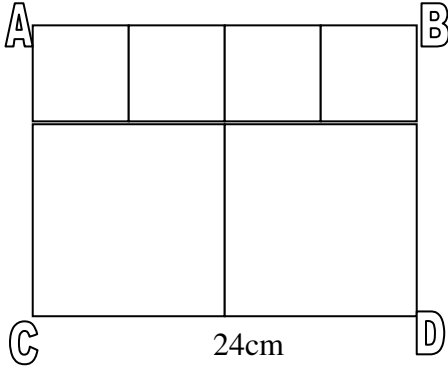
24.	<p>If 75% of a class of 32 students is present, how many students are absent from the class?</p> <p>Answer: _____(2)</p>	<p>Present = 75% Absent = 25%</p> $\frac{25}{100} = \frac{1}{4}$ $\frac{1}{4} \times \frac{32}{1}$ $= 8 \text{ absent}$							
25.	<p>In the diagram below, the area of the rectangle is 76 cm². What is the area of the largest triangle?</p>  <p>Answer: _____(2)</p>	<p>Area of rect. = 76 cm²</p> <p>Area of triangle = 76cm² ÷ 2</p> $= 38\text{cm}^2$							
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 Arrived at work = : 43 Arrived = 8 : 10 Work Began = : 10 8 : 20 8 :20am</p>							
27	<p>In a football tournament points were awarded as follows:</p> <table border="1" data-bbox="264 1293 849 1409"> <tbody> <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> </tbody> </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 Points awarded = 7 Won = 6 Rem. = 1 point</p> <p>1 point = 1 game drawn</p> <p>2 games won, 1 game 3 drawn</p> <p>Therefore</p> $\text{Lost} = 5 - 3$ $= 2$	
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>= 600 tiles</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) $X = 180^\circ - (90 + 30)$ $= 180^\circ - 120^\circ$ $= 60^\circ$</p> <p>(b) $Y = 180^\circ - 30^\circ$ $= 150^\circ$</p>	
30.	<p>Calculate the area and perimeter of the compound shape below</p>  <p>Area: _____ Perimeter: _____</p> <p>Answer: _____(3)</p>	<p>Area of shape A = L x W $= 6 \times 4$ $= 24\text{cm}^2$</p> <p>Area of shape B = L x W $= 12 \times 2$ $= 24\text{cm}^2$</p> <p>**Total Area = 24cm² + 24cm² $= 48\text{cm}^2$</p> <p>Perimeter of shape = $4 + 6 + 4 + 2 + 12 + 2 + 4 + 6$ $= 40\text{cm}$</p>	

<p>31.</p>	 <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 = $L \times W$ $= 14 \times 10$ $= 140\text{m}^2$</p> <p>(b) Total Area of Surface = $L \times W$ $= 16 \times 12$ $= 192\text{m}^2$</p> <p>Area of c.walkway = $192 - 140$ $= 52\text{m}^2$</p>	
<p>32.</p>	<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 = $\frac{2}{3}$ action 36 cartoons = $\frac{2}{3} \times \frac{36 \cdot 12}{1}$ $= 12 \times 2$ = 24 action movies</p>	
<p>33.</p>	<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 = $\frac{480 - 24}{20}$ $= 24 + 1$ = 25 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 5th box below. (2)</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <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 7th box?</p> <p>Answer: _____(1)</p>	<div style="text-align: center;">  </div> <p style="text-align: center;">7th box = 21 + 7 = 28 dots</p>																					
36.	<p style="text-align: center;">Complete the Bill below</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <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 style="text-align: center;">□</td> </tr> <tr> <td>Rice</td> <td>2.5kg</td> <td style="text-align: center;">□</td> <td>\$15.00</td> </tr> <tr> <td>Chicken</td> <td style="text-align: center;">□</td> <td>\$16.00</td> <td>\$48.00</td> </tr> <tr> <td colspan="3" style="text-align: center;">TOTAL</td> <td>\$68.00</td> </tr> </tbody> </table> <p>Answer: _____(3)</p>	Items	Quantities	Cost/kg	TOTAL	Potatoes	2kg	\$2.50	□	Rice	2.5kg	□	\$15.00	Chicken	□	\$16.00	\$48.00	TOTAL			\$68.00	<p style="text-align: center;">Potatoes \$ 2.50 x 2 = \$ 5.00</p> $ \begin{aligned} & \$15 \div 2.5 \\ & = \frac{15}{1} \div \frac{5}{2} \\ & = \frac{15 \cancel{3}}{1} \div \frac{\cancel{5} 1}{\cancel{5} 1} \\ & \text{Rice} = \$6.00 \end{aligned} $ <p style="text-align: center;">Chicken = \$ 48 3 = \$16 1 = 3kg</p>	
Items	Quantities	Cost/kg	TOTAL																				
Potatoes	2kg	\$2.50	□																				
Rice	2.5kg	□	\$15.00																				
Chicken	□	\$16.00	\$48.00																				
TOTAL			\$68.00																				

37



Rectangle ABCD is made up of 2 large identical squares and 4 small identical squares. Calculate:

- (a) The length of each of the side of the small square if DC= 24cm
Answer: _____(1)

- (b) The area of the rectangle ABCD

Answer: _____(2)

$$DC = 24\text{cm}$$

$$AB = 24\text{cm}$$

$$* 24 \div 4$$

$$= 6\text{cm}$$

- (a) Each small square has a side of **6cm**

$$AC = 24 + 6$$

$$= 30\text{cm}$$

- (b) Area of Rectangle = $L \times W$
 $= 18 \times 24$
 $= \mathbf{432 \text{ cm}^2}$

38. Tom invested \$20,000 for 5 years at 8% per annum.
Calculate:

- (a) The amount of interest Tom collected for one year.

Answer: _____(1)

- (b) The total amount he would collect from his investment.

Answer: _____(2)

$$(a) \text{ Simple Interest} = \frac{P \times R \times T}{100}$$

$$= \frac{20000 \times 1 \times 8}{100}$$

$$\mathbf{1 \text{ year} = \$ 1600}$$

$$(b) 5 \text{ years} = \$ 1600 \times 5$$

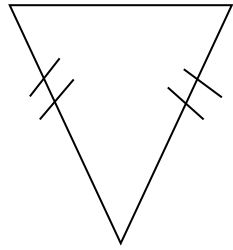
$$= \$ 8000$$

$$\text{Amount} = \text{Principal} + \text{S.I}$$

$$= 20000 + \$ 8000$$

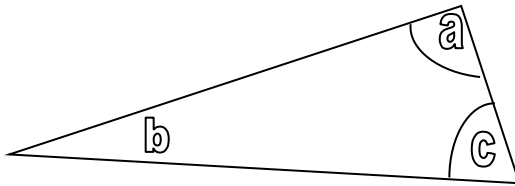
$$= \mathbf{\$ 28000}$$

39.



(a) Name the type of triangle shown above.

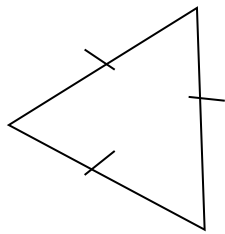
Answer: _____ (1)



(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.

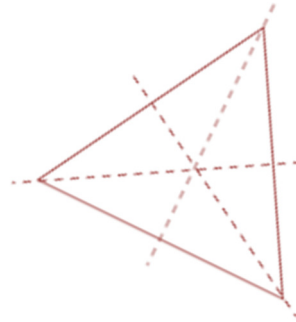


Answer: _____ (1)

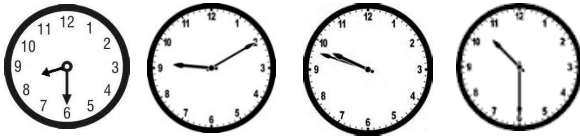
(a) **Isosceles Triangle**

(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

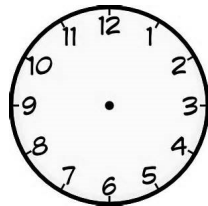
(a) How many minutes after the start of each subject does the next subject start?

Answer: _____(1)

(b) The 5th 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)

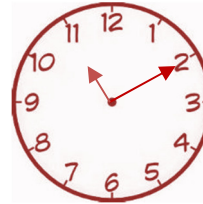


(a) **40 minutes**

(b) $10 : 30 + 40$

= 11: 10

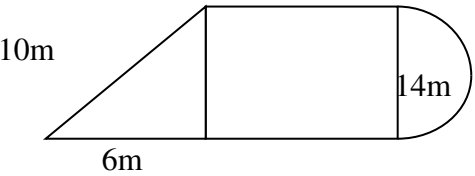
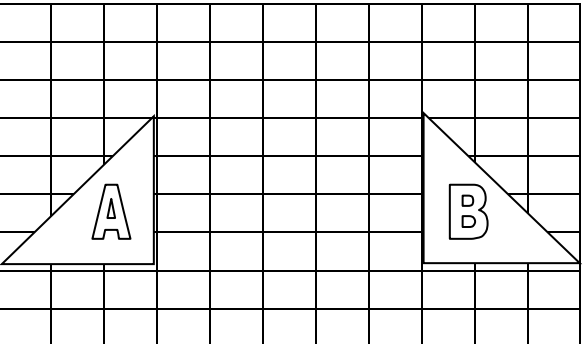
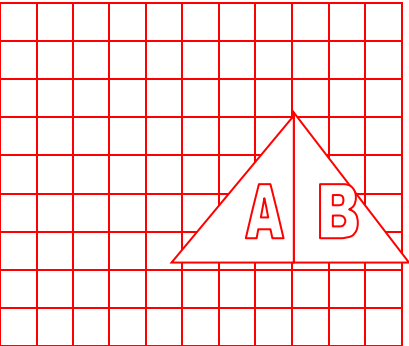
(c)





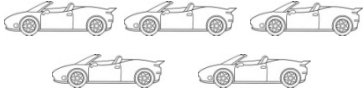

SECTION 3


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 $12\frac{1}{2}\%$ more than Samantha.</p> <p>(a) Calculate how much money each child received. Samantha= \$ _____ Shawn=\$ _____</p> <p>Answer: _____(2)</p> <p>(b) Shawn spent $\frac{1}{5}$ of his money on snacks and $\frac{5}{12}$ of the remainder on a toy. Calculate how much money he had left.</p> <p>Answer: _____(3)</p>	<p>(a) Shawn = $12\frac{1}{2}\%$ $= \frac{1}{8}$ $\frac{1}{8} \times \frac{320 \cdot 40}{1}$ $= 40$ $320 - 40 = 280$ $\frac{280}{2} = 140$ 2</p> <p>Samantha = \$140 Shawn = \$140 + \$ 40 = \$180</p> <p>(b) Snacks = $\frac{1}{5}$ Remainder = $\frac{4}{5}$ Toy = $\frac{5}{12} \times \frac{4}{5} = \frac{1}{3}$ Spent = $\frac{1}{5} + \frac{1}{3}$ $= \frac{8}{15}$ Left = $\frac{15}{15} - \frac{8}{15}$ $= \frac{7}{15}$ $\frac{7}{15} \times \frac{180}{1}$ = \$ 84</p>	

<p>42</p>	 <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 = $D \div 2$ $= 14 \div 2$ $= 7\text{m}$</p> <p>(b) Circumference = $\frac{1}{2} (D \times \pi)$ $= \frac{1}{2} \left(\frac{14}{1} \times \frac{22}{7} \right)$ $= \frac{1}{2} \times 44$ $= 22\text{m}$</p> <p>Perimeter = $22 + 25 + 6 + 10 + 25$ $= 88\text{m}$</p> <p>(c) Area of rect. = 25×14 $= 350\text{m}^2$ Area of triangle = $\frac{14 \times 6}{2}$ $= 42\text{m}^2$</p> <p>Total Area = $350\text{m}^2 + 42\text{m}^2$ $= 392\text{m}^2$</p>	
<p>43.</p>	<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 1cm^2. Answer: _____ (1)</p>	 <p>(b) Slide five (5) units right</p> <p>(c) Isosceles Triangle</p> <p>(d) Area of $\triangle = \frac{B \times H}{2}$ $= \frac{6 \times 4}{2}$ $= 12\text{cm}^2$</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) $\text{Total} = 84 + 69 + 89 + 46$ $= 288$</p> <p>(a) $\text{Mean} = \frac{288}{4}$ $= 72 \text{ marks}$</p> <p>(b) $80 \times 5 = 400$ $= 400 - 288$ $= 112 \text{ marks}$</p> <p>(c) $\text{Mean Score} = \frac{112}{2}$ $= 56 \text{ marks}$</p>	
END OF TEST 1			