

TEST

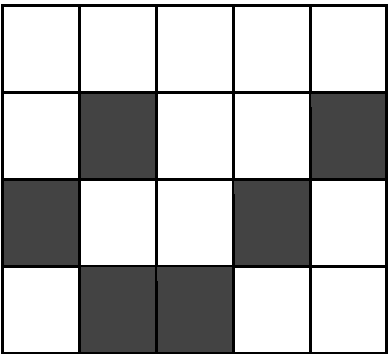
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MATHEMATICS TEST 8


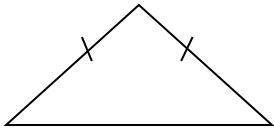
TIME- 75 MINUTES

SECTION 1

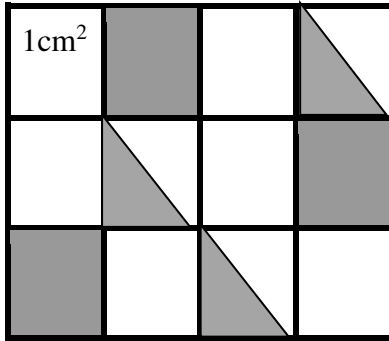
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

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

4.	<p>Order the following fractions from smallest to largest.</p> $\frac{3}{16}, \frac{1}{4}, \frac{3}{8}$ <p>Answer: _____</p>	$\frac{3}{16}, \frac{1}{4}, \frac{3}{8}$							
5.	<p>State the PLACE VALUE of the underlined digit in the number 86. <u>7</u>9</p> <p>Answer: _____</p>	<p>Hundredths</p>							
6.	<p>Complete the table below.</p> <table border="1" data-bbox="224 810 873 1054"> <thead> <tr> <th>Common Fraction</th> <th>Decimal</th> <th>%</th> </tr> </thead> <tbody> <tr> <td></td> <td>.65</td> <td>65%</td> </tr> </tbody> </table> <p>Answer: _____</p>	Common Fraction	Decimal	%		.65	65%	$\frac{65}{100} = \frac{13}{20}$	
Common Fraction	Decimal	%							
	.65	65%							
7.	<p>Approximate 6 854 190 to the nearest thousand.</p> <p>Answer: _____</p>	<p>6 854 000</p>							
8.	<p>Express $37\frac{1}{2}\%$ as a common fraction.</p> <p>Answer: _____</p>	$37\frac{1}{2}\% = \frac{75}{200}$ $= \frac{3}{8}$							
9.	<p>$10^2 - 6^2 =$</p> <p>Answer: _____</p>	$10^2 - 6^2 = 100 - 36$ $= 64$							

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> <p>11cm</p>  <p>Answer: _____ cm</p>	$ \begin{array}{r} \text{Perimeter} = S \times 4 \\ = 11 \times 4 \\ = \mathbf{44\text{cm}} \end{array} $	
12.	<p>What is the most suitable unit you can use to measure the length of your classroom?</p> <p>Answer: _____</p>	<p>Metres</p>	
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>  <p>Answer: _____</p>	<p>Isosceles</p>	

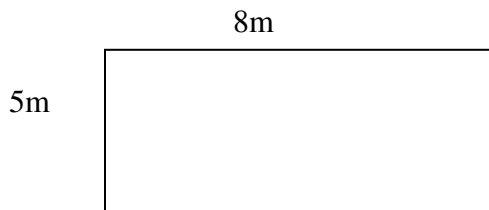
15. Calculate the area of the SHADED portion of the diagram below.



Answer: _____ cm²

4.5 cm²

16. Calculate the area of the rectangle below.



Answer: _____ m²

$$\begin{aligned} \text{Area of rect.} &= L \times W \\ &= 8 \times 5 \\ &= \mathbf{40m^2} \end{aligned}$$

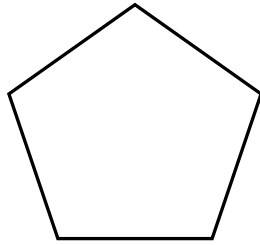
17. Write the time shown on the clock below in digital notation?



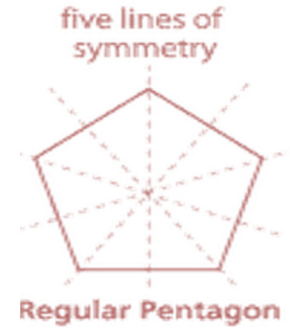
Answer: _____

11:55

18. Draw the lines of symmetry in the pentagon below



Answer: _____



19. What solid can be formed from the net shown below?



Answer: _____

Triangular prism

20. Complete the table below.

Colour	Tally	Frequency
Yellow		3
Orange		1
Pink		9

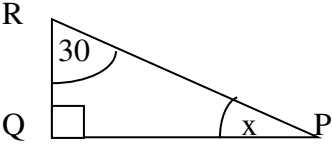
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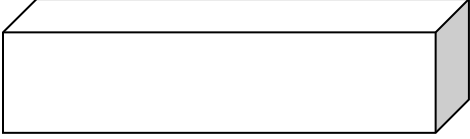

Answer: _____

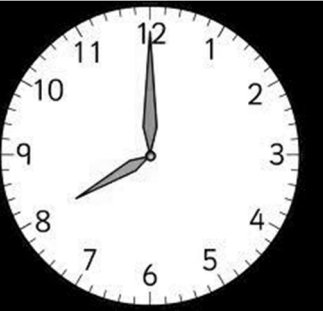
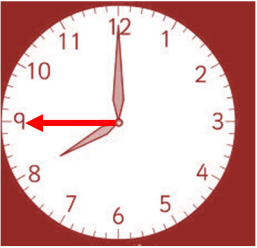
SECTION 2

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

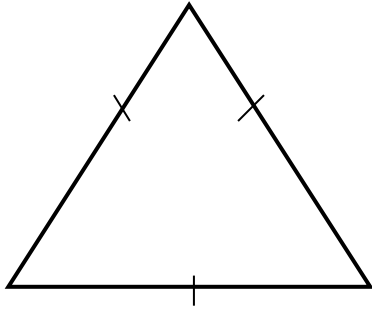
No.	Items	Working Column	Marks																						
21.	<p>There are 12 cupcakes in a box. If each person gets 1 cupcake, how many boxes of cupcakes will be needed for a school of 412 students and 20 teachers.</p> <p>Answer: _____ (2)</p>	<p>Total no. of persons = 412 + <u>20</u> 432</p> <p>No. of boxes needed = 432 ÷ 12 = 36 boxes</p>																							
22.	<p>Calculate:</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right;">kg</td> <td style="text-align: right;">g</td> </tr> <tr> <td style="text-align: right;">8</td> <td style="text-align: right;">240</td> </tr> <tr> <td style="text-align: right;">-</td> <td style="text-align: right;"><u>5</u></td> </tr> <tr> <td></td> <td style="text-align: right;">320</td> </tr> </table> <p>Answer: _____(2)</p>	kg	g	8	240	-	<u>5</u>		320	<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right;">kg</td> <td style="text-align: right;">g</td> </tr> <tr> <td style="text-align: right;">7</td> <td style="text-align: right;">1240</td> </tr> <tr> <td style="text-align: right;">8</td> <td style="text-align: right;"><u>-240</u></td> </tr> <tr> <td style="text-align: right;">-</td> <td style="text-align: right;"><u>5</u></td> </tr> <tr> <td></td> <td style="text-align: right;">320</td> </tr> <tr> <td style="text-align: right;"><u>2</u></td> <td style="text-align: right;"><u>920</u></td> </tr> <tr> <td></td> <td style="text-align: right;">2kg 920g</td> </tr> </table>	kg	g	7	1240	8	<u>-240</u>	-	<u>5</u>		320	<u>2</u>	<u>920</u>		2kg 920g	
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23.	<p>Sanjay picked 480 mangoes. He sold $\frac{1}{2}$ of his mangoes, gave his friend Aidan, $\frac{2}{3}$ 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 = $\frac{2}{3} \times \frac{240}{1}$ = 120 mangoes Left with = $\frac{1}{3} \times \frac{240}{1}$ = 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><u>3 : 55</u> – <u>3 : 15</u> <u>0 : 40</u></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>	$\begin{array}{r} 4.9 \\ 12.0 \\ \underline{0.75} \\ \mathbf{17.65} \end{array}$	
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: _____ m² (2)</p>	$\begin{aligned} \text{Area of rect.} &= L \times W \\ &= 8.35 \times 2.5 \\ &= \mathbf{20.875 \text{ m}^2} \end{aligned}$	
29.	<p>Calculate the size of angle RPQ in degrees.</p>  <p>Answer: _____ degrees (2)</p>	$\begin{aligned} x &= 180^{\circ} - (30^{\circ} + 90^{\circ}) \\ x &= 180^{\circ} - 120^{\circ} \\ x &= \mathbf{60^{\circ}} \end{aligned}$	

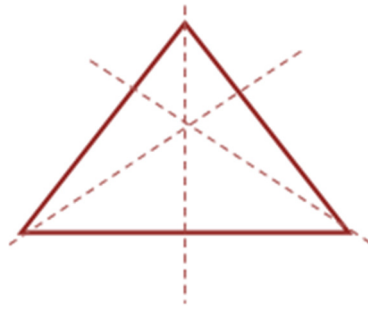
<p>30.</p>	<p>What is the volume of a cuboid that is 20 cm high, 8 cm wide and 24 cm long?</p>  <p>Answer: _____ cm³(2)</p>	<p>Volume of cuboid = L x W x H = 24 x 20 x 8 = 3840cm³</p>	
<p>31.</p>	<p>The marked price of a television is \$1200. 00</p>  <p>A discount of 20% was given during a sale. How 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>= \$960</p>	
<p>32.</p>	<p>James spent $\frac{1}{3}$ of his allowance to buy a game. He later spent \$20.00 for a new book. He now has $\frac{1}{3}$ of his money remaining. What was James' allowance?</p> <p>Answer _____ (3)</p>		

<p>33.</p>	<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} \\ &= \mathbf{\$1437.50} \end{aligned} $	
<p>34.</p>	<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} $	
<p>35.</p>	<p>Susan left home at the time shown on the clock below. 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>  <p style="text-align: right;">(1)</p> <p>(b) Through what angle did the minute hand turn?</p> <p>Answer: _____ degrees (2)</p>	<p>(a)</p>  <p>(b) 1 space = 30° 9 spaces = $30^{\circ} \times 9$ = 270°</p>	

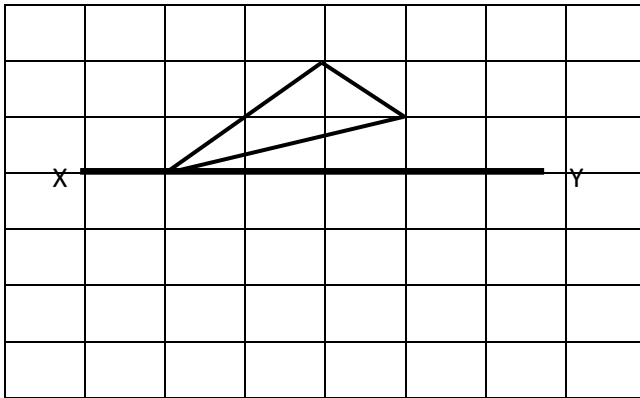
36. The triangle below is an equilateral triangle. Draw the lines of symmetry.



(3)



37.



The line XY is a mirror line.

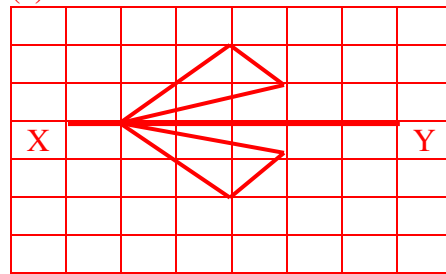
a) Draw the image of the shape on the grid above.

Answer: _____ (2)


b) Name the movement.

Answer: _____ (1)

(a)



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

<p>38.</p>	<p>The cup below is $\frac{2}{3}$ 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 $\frac{2}{3}$ is filled, then $\frac{1}{3}$ is not filled</p> <p>$\therefore \frac{1}{3} = 80\text{ml}$ $1 = 80 \times 3$ $= 240\text{ml}$</p> <p>(b) Half –filled = $240 \div 2$ $= 120\text{ml}$</p>	
<p>39.</p>	<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 = $1.00 - 0.75$ $= 0.25$ $= \frac{1}{4}$</p> <p>(b) Car = $\frac{3}{4} \times \frac{40}{1}$ $= 30 \text{ km}$</p>	
<p>40.</p>	<p>Karen spent $\frac{1}{5}$ 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 = $\frac{1}{5}$ Balance = $\frac{4}{5}$ Snacks = $\frac{1}{2} \times \frac{4}{5}$ $= \frac{2}{5}$ \therefore Left with = $1 - (\frac{2}{5} + \frac{1}{5})$ $= 1 - \frac{3}{5}$ $= \frac{2}{5}$</p>	

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	<input style="width: 50px; height: 20px;" type="text"/>
Eggs	2 dozens	\$ <input style="width: 50px; height: 20px;" type="text"/>	\$32.00
Sugar	<input style="width: 50px; height: 20px;" type="text"/> 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) $2 \text{ doz. eggs} = \$32.00$
 $1 \text{ doz.} = \$32.00 \div 2$
 $= \$16.00$

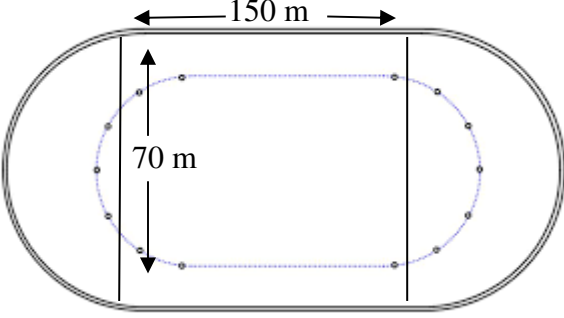
(c) $\$14.00 \div \3.50
 $= \frac{1400}{350}$
 $= 4 \text{ kgs}$

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

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

<p>42.</p>	<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 = 50 shirts</p> <p>(b) 5 days = 50 x 5 = 250 shirts</p> <p>(c) Made = 700 shirts No. of days taken = 700 ÷ 50 = 14 days</p>	
<p>43.</p>	<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 $\frac{2}{5}$</p> <p>$\frac{2}{5} = 60$ $1 = \frac{60}{1} \times \frac{5}{2}$ = 150 marbles</p> <p>(b) Friend = 40% x 150 = .4 x 150 = 60 marbles</p>	
<p>44.</p>	<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 = 210m</p> <p>(b) Area of rect. = L x W = 70 x 35 = 2450m²</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) $9:00 - 6:00 = 9$ hours $1 \text{ hr.} = \\$15$ $9 \text{ hrs.} = \\$15 \times 9$ Daily wage = \$135</p> <p>(b) $1 \text{ day} = \\$135$ $5 \text{ days} = \\$135 \times 5$ Weekly wage = \$675</p> <p>(c) $1 \text{ week} = \\$675$ $4 \text{ weeks} = \\$675 \times 4$ Monthly wage = \$2700</p>
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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) $\text{Circumference} = D \times \pi$ $= \frac{70}{1} \times \frac{22}{7}$ $= 220\text{m}$</p> <p>$\text{Distance around} = 150 + 150 + 220$ $= 520\text{m}$</p> <p>(b) $1 \text{ lap} = 520$ $5 \text{ laps} = 520 \times 5$ $= 2600\text{m} \div 100$ $= 2.6\text{km}$</p>
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END OF TEST 8