

TEST

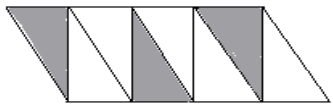
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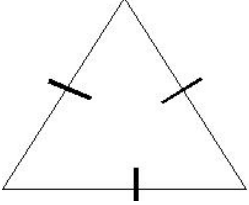
MATHEMATICS TEST 17


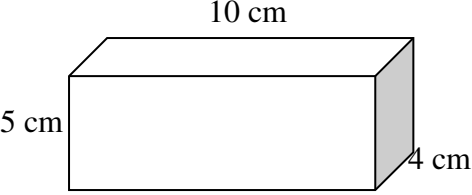
TIME- 75 MINUTES

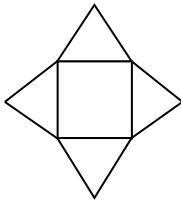
SECTION 1

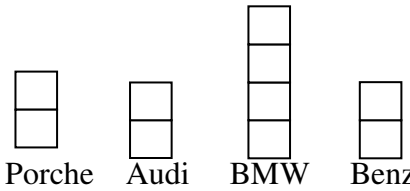
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

No.	Items	Working Column	Marks
1.	Express as a single number. $(5 \times 100000) + (3 \times 1000) + (2 \times 10) + (9 \times 1)$ Answer _____	503029	
2.	What fraction of the figure is shaded?  Answer _____	$\frac{3}{8}$	
3.	15 minutes is what decimal fraction of 1 hour? Answer _____	$\frac{15}{60} = \frac{1}{4}$ $\frac{1}{4} = 0.25$	
4.	Solve $3.5 \div 0.25$ Answer _____	$3.5 \div 0.25$ $= 350 \div 25$ $= 14$	

5.	<p>State the name of the triangle below.</p>  <p>Answer _____</p>	Equilateral Triangle																			
6.	<p>Complete the number pattern.</p> <p>1, 2, 4, 8, 16, _____, 64.</p> <p>Answer _____</p>	$16 \times 2 = 32$																			
7.	<p>If $6 \times Y = 36$.</p> <p>What is the value of $4 \times Y$.</p> <p>Answer _____</p>	 $6 \times Y = 36$ $Y = 36 \div 6$ $Y = 6$ $4 \times Y = 4 \times 6$ $= 24$ 																			
8.	<p>What percent of 20 is 12?</p> <p>Answer _____</p>	 $\frac{12}{20} \times \frac{100}{1}$ $= 60\%$ 																			
9.	<p>Solve:</p> <table style="margin-left: 40px;"> <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 style="margin-left: 40px;"> <tr> <td>m</td> <td>cm</td> </tr> <tr> <td>28</td> <td>144</td> </tr> <tr> <td>- 5</td> <td>82</td> </tr> <tr> <td style="border-top: 1px solid black;">22</td> <td style="border-top: 1px solid black;">62</td> </tr> </table> <p>22m 62 cm</p>	m	cm	28	144	- 5	82	22	62	
m	cm																				
28	44																				
- 5	82																				
_____	_____																				
_____	_____																				
m	cm																				
28	144																				
- 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 style="text-align: center;">1 hour = \$12.50 8 hours = \$12.50 x 8 = \$100</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 style="text-align: center;">5:00 – 3:25 = 1 hour 35 minutes</p>	
12.	<p>How many lines of symmetry are there in the rectangle?</p> <div style="text-align: center;">  </div> <p>Answer _____</p>	<p style="text-align: center;">2 lines of symmetry</p>	
13.	<p>Calculate the volume of the cuboid.</p> <div style="text-align: center;">  </div> <p>Answer _____</p>	<p style="text-align: center;">Volume of cuboid = L x W x H = 10 x 5 x 4 = 200cm³</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 = $\frac{3}{2}$ 12 jumps = $\frac{3}{2} \times \frac{12}{1}$ = 18 handclaps</p>	
15.	<p>Complete the statement.</p> <p>2.8L = _____ ml</p> <p>Answer _____</p>	<p>2.8 L = 2.8 x 1000 = 2800 ml</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 & S = 80 + 60 = 140 coconuts</p>	
17.	<p>Name the solid that represents the shape below?</p>  <p>Answer _____</p>	<p>Square-based pyramid</p>	

<p>18.</p>	<p>A pupil left home at 7:15 am and arrived at school $1\frac{1}{5}$ hours later. At what time did he arrive at school?</p> <p>Answer _____</p>	$\frac{1}{5} \times \frac{60}{1} = 12 \text{ minutes}$ $7:15 + 1:12 = \mathbf{8:27 \text{ am}}$	
<p>19.</p>	<p>The average of two numbers is 14. If one of the number is 8, what is the other number?</p> <p>Answer _____</p>	$\begin{aligned} \text{Total} &= 14 \times 2 \\ &= 28 \\ X + 8 &= 28 \\ X &= 28 - 8 \\ &= \mathbf{20} \end{aligned}$	
<p>20.</p>	<p>The graph below shows Randy's toy car collection.</p> <div style="text-align: center;">  <p>Porche Audi BMW Benz</p> </div> <p style="text-align: center;"> <input type="checkbox"/> Represents 5 toy cars </p> <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.	<p>How many 250 gram packets of curry powder can I get from $4\frac{1}{4}$ kg?</p> <p>Answer _____ (2)</p>	$250\text{g} = \frac{1}{4}$ $4\frac{1}{4} = \frac{17}{4}$ <p>$\therefore 17 - 250\text{g packets}$</p>	
22.	<p>A machine produces 5 buttons every 10 seconds. How many buttons can be produced in 3 minutes?</p> <p>Answer _____ (2)</p>	$10 \text{ seconds} = 5 \text{ buttons}$ $60 \text{ seconds} = 6 \times 5$ $= 30 \text{ buttons}$ $1 \text{ minute} = 30 \text{ buttons}$ $3 \text{ minutes} = 30 \times 3$ $= 90 \text{ buttons}$	
23.	<p>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?</p> <p>Answer _____ (2)</p>	$24 \div 3 = 8$ $8 + 1 = 9 \text{ children}$	
24.	<p>Calculate the difference between $6\frac{1}{4}$ and $4\frac{5}{8}$.</p> <p>Answer _____ (2)</p>	$6\frac{1}{4} - 4\frac{5}{8}$ $\underline{21\frac{2}{8} - 5} = 1\frac{5}{8}$	

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 Yellow = $\frac{6}{25} \times \frac{100}{1}$ = 24%</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 $\frac{120}{100} = 600$ $\frac{6}{5} = 600$ $1 = \frac{600}{1} \times \frac{5}{6}$ = 500</p>	
27.	<p>Mr. Sam uses $\frac{3}{5}$ of his salary to pay his rent. He saved $\frac{1}{2}$ 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 = $\frac{3}{5}$ Remainder = $\frac{2}{5}$ Saved = $\frac{1}{2} \times \frac{2}{5}$ = $\frac{1}{5}$ Left with = \$800 $\frac{1}{5} = \\$800$ $1 = \\$800 \times 5$ = \$4000</p> <p>(b) Rent = $\frac{3}{5} \times \frac{4000}{1}$ = \$2400</p>	

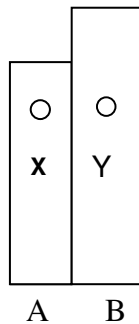
28.	<p>Oranges are placed in boxes each containing 4 layers. Each orange has a weight of 50 grams and all the oranges weighed 4kg .</p> <p>Calculate:</p> <p>(a) How many oranges were packed in ONE box?</p> <p>Answer _____ (2)</p> <p>(b) How many oranges were there in EACH layer?</p> <p>Answer _____ (1)</p>	<p>(a) 1 box = 4000g 1 orange = 50g No. of oranges in box = $4000 \div 50$ = 80 oranges</p> <p>(b) 4 layers = 80 oranges 1 layer = $80 \div 4$ = 20 oranges</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>$\\$9.30 - \\$4.20 = \\$5.10$</p> <p>$\\$5.10 \div 2 = \\$2.55$</p> <p>Pencil = \$2.55 Pen = $\\$2.55 + \\4.20 = \$ 6.75</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>$C.P + VAT = 100\% + 15\%$ = 115%</p> <p>$\frac{115}{100} \times \frac{1500}{1}$</p> <p>= \$1725</p>	
31.	<p>Two containers weigh $5\frac{1}{2}$ kg. If one container weighs $3\frac{7}{8}$ kg, What is the weight of the other container?</p> <p>Answer _____ (2)</p>	<p>$5\frac{1}{2} - 3\frac{7}{8}$</p> <p>= $2\ 1\frac{124 - 7}{8}$</p> <p>= $1\frac{5}{8}$ kg</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 = $5.6 \div 4$ = 1.4 Area of square = $S \times S$ = 1.4×1.4 = 1.96cm²</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 = $65\% \times 280$ = $\frac{65}{100} \times \frac{280}{1}$ = 182 seats</p> <p>(b) 1 ticket = \$15 182 tickets = $\\$15 \times 182$ = \$ 2730</p>	
34.	<p>Which shop has the best buy for rubber bands?</p> <p>SHOP A = 3 for \$1.20</p> <p>SHOP B = 5 for \$1.80</p> <p>SHOP C = 8 for \$3.60</p> <p>Answer _____ (3)</p>	<p>Shop A = $\\$1.20 \div 3$ = \$0.40</p> <p>Shop B = $\\$1.80 \div 5$ = \$0.36</p> <p>Shop C = $\\$3.60 \div 8$ = \$0.45</p> <p>Shop B has the best buy \$0.36</p>	

<p>35.</p>	<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 = \$15 x 2 = \$30</p> <p>6 hours = 1 day 1 day = \$15 x 6 = \$90 4 days = \$90 x 4 = \$360 Overtime = 5 x \$30 = \$150 Total wage = \$360 + \$150 = \$510</p>	
<p>36.</p>	<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 = $\frac{60 \times 40 \times 20}{4 \times 4 \times 4}$</p> <p>= 15 x 10 x 5 = 750 cubes</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.

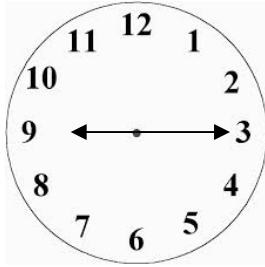
What is the length of post B?

Answer _____ (2)

(a) Far from ground = $80 - 15$
= **65m**

(b) Length of Post B = $65 + 25$
= **90m**

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)

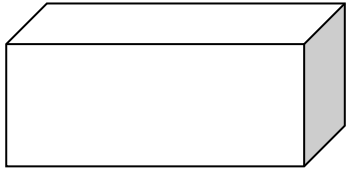
(a) $\frac{1}{4}$ turn = 3 spaces

Minute hand now points to **6**

(b) **9:30**

39. Name the solid shown below.

(a)



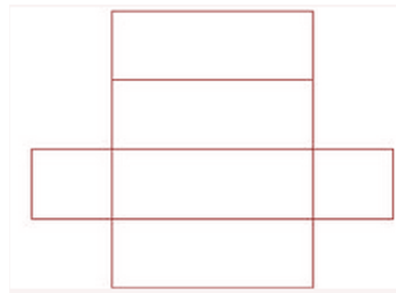
Answer _____ (1)

(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)

$$\begin{aligned} \text{(a) Savings} &= 100\% - (15\% + 30\% + 25\%) \\ &= 100\% - 70\% \\ &= 30\% \end{aligned}$$

$$\text{Savings} = \frac{30}{100} \times \frac{6000}{1}$$

$$= \$1800$$

$$\begin{aligned} \text{(b) Food - Clothing} &= 25\% - 15\% \\ &= 10\% \end{aligned}$$

$$\frac{10}{100} \times \frac{6000}{1}$$

$$= \$600$$

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 = 3×95 = 285</p> <p>(b) 2 seaters = $425 - 285$ = 140</p> <p>(c) No. of 2 seaters needed = $140 \div 2$ = 70</p>	

<p>42.</p>	<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) $\text{Cake} = 420 \div 60$ $= 7 \text{ boxes}$</p> <p>(b) $\text{Ice- Cream} = 420 \div 24$ $= 17.5$ $= 18 \text{ cases}$</p> <p>(c) $\frac{1}{2} \text{ case} = 24 \div 2$ $= 12 \text{ ice-cream}$ No. of children $= 12 \div 3$ $= 4 \text{ ice-creams}$</p>	
<p>43.</p>	<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) $\text{Gain} = \\$5400 - \\4800 $= \\$600$</p> <p>(b) $\text{Gain}\% = \frac{600}{4800} \times \frac{100}{1}$ $= 12.5\%$</p> <p>(c) $\text{Discount} = 10\%$ $\text{Paid} = \\$5400 \times 90\%$ $= \\$4860$</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)

$$\begin{aligned} \text{(a) } 6\text{kg turkey} &= \$16 \times 6 \\ &= \$96 \end{aligned}$$

$$\begin{aligned} 3\text{kg duck} &= \$50 \times 3 \\ &= \$150 \end{aligned}$$

$$\begin{aligned} 1\text{ kg goat} &= \$54 \times 1 \\ &= \$54 \end{aligned}$$

$$\begin{aligned} \text{Total} &= \$96 + \$150 + \$54 \\ &= \mathbf{\$300} \end{aligned}$$

$$\text{(b) Total} = \$256$$

$$\begin{aligned} 2\text{ kg chicken} &= \$16 \\ \text{Left with} &= \$256 - \$16 \\ &= \$240 \end{aligned}$$

$$\begin{aligned} 2\text{ kg Turkey} &= \$32 \\ \text{Left with} &= \$240 - \$32 \\ &= \$208 \end{aligned}$$

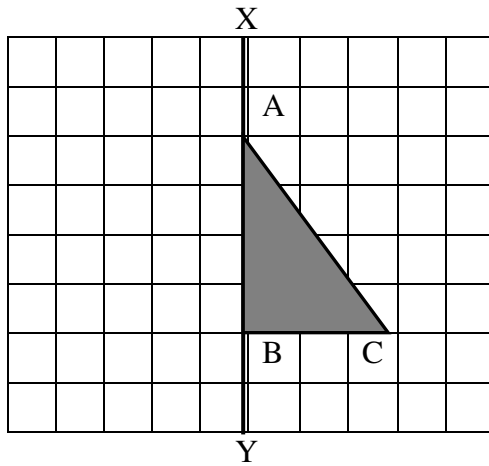
$$\begin{aligned} 2\text{ kg goat} &= \$108 \\ \text{Left with} &= \$208 - \$108 \\ &= \$100 \end{aligned}$$

$$\begin{aligned} 2\text{ kg duck} &= \$50 \times 2 \\ &= \$100 \end{aligned}$$

∴ 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.

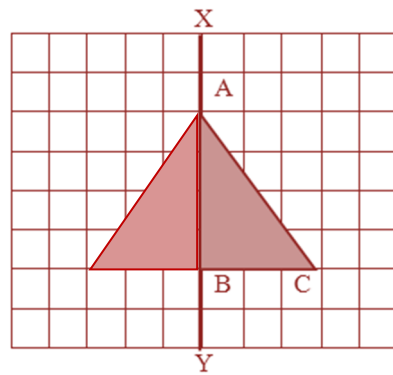
(2)

(b) Name the complete shape formed.

Answer _____ (1)

(c) If each square has an area of 1cm^2 calculate the area of the complete shape.

Answer _____ (2)



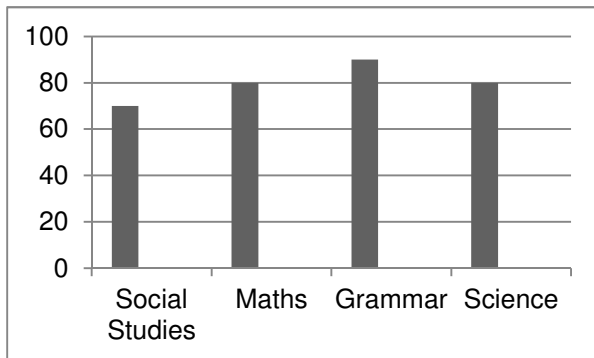
(b) **Isosceles Triangle**

(c) Area of Triangle = $\frac{B \times H}{2}$

$$= \frac{6 \times 4}{2}$$

$$= \mathbf{12\text{cm}^2}$$

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) **Total = 70 + 80 + 90 + 80
= 320**

(c) **Mean = 320 ÷ 4
= 80**

END OF TEST 17