

TEST 15

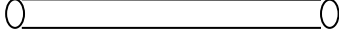
MATHEMATICS TEST 15

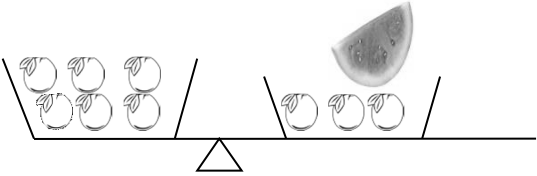
TIME- 75 MINUTES

SECTION 1

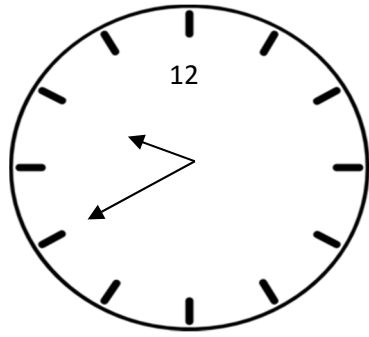
Each question is worth 1 mark. Answer ALL questions. Show ALL working in the Working Column.

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

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 Side = $60 \div 4$ = 15cm</p> <p>2 sides = 15×2 = 30cm</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 $(N - 25) \div 3 = 15$ $15 \times 3 = 45$ $45 + 25 = 70$ $\therefore N = 70$</p>	
7.	<p>Calculate 7135 decreased by 487.</p> <p>Answer: _____</p>	<p>$7135 - 487$ = 6648</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;">732</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>$250\text{ml} = \frac{1}{4}$ $\frac{1}{4} = \\$4.50$ $1 = \\$4.50 \times 4$ = \$18.00</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 84 cm^2. 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.

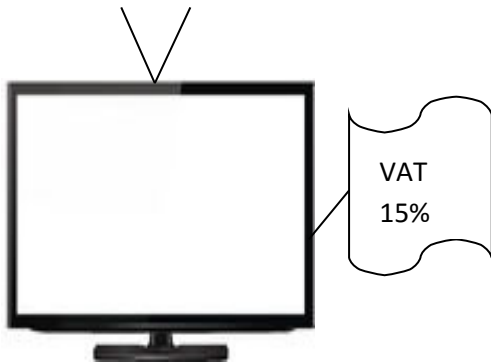


The clock shows the time Vana arrived for a doctor's appointment. She was 10 minutes late. What time should she have arrived?

Answer: _____

9:30

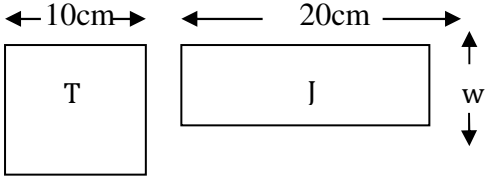
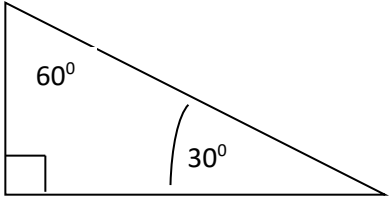
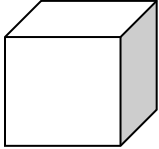
14. VAT is charged at a rate of 15%.

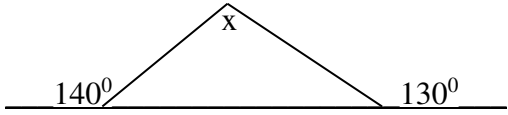


Complete the table below.

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. (The shapes are not drawn to scale.)</p>  <p>Both shapes have the same area. Calculate the width, w, of the rectangle.</p> <p>Answer: _____</p>	<p style="color: red;">Area of T = $S \times S$ $= 10 \times 10$ $= 100\text{cm}^2$</p> <p style="color: red;">Width of rectangle = $\frac{\text{Area}}{\text{Length}}$</p> <p style="color: red;">$= \frac{100\text{cm}^2}{20\text{cm}}$ $= 5\text{cm}$</p>	
<p>16.</p>	<p>Name the type of triangle shown below.</p>  <p>Answer: _____</p>	<p style="color: red;">Right Angled Triangle / Scalene Triangle</p>	
<p>17.</p>	<p>A cube has an edge of 11 cm. Calculate its volume.</p>  <p>11cm</p> <p>Answer: _____</p>	<p style="color: red;">Volume of cube = $S \times S \times S$ $= 11 \times 11 \times 11$ $= 1331\text{cm}^3$</p>	

18.	<p>Calculate the size of angle x</p>  <p>Answer: _____</p>	$x^{\circ} = 180^{\circ} - (50^{\circ} + 40^{\circ})$ $x^{\circ} = 180^{\circ} - 90^{\circ}$ $x^{\circ} = 90^{\circ}$													
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>	$\text{Mean} = \frac{15 + 10 + 9 + 12 + 14}{5}$ $= \frac{60}{5}$ $= 12$													
20.	<p>The table shows the results of a survey done by a Standard One teacher.</p> <table border="1" data-bbox="277 1182 852 1360"> <tbody> <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> </tbody> </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	$\text{Total number of children} = 7 + 13 + 20 + 15 + 5$ $= 60$ $\text{Size 5} = \frac{20}{60} \times \frac{100}{1}$ $= 33\frac{1}{3} \%$	
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)	$12\frac{1}{2} - 7\frac{5}{8}$ $= 5\frac{4}{8} - \frac{5}{8}$ $= 4\frac{7}{8}$	
22.	How many twelfths are there in $6\frac{2}{3}$? Answer: _____ (2)	$6\frac{2}{3} = \frac{20}{3}$ $\frac{20}{3} = \frac{\quad}{12}$ $\square = 20 \times 4$ $= \mathbf{80 \text{ twelfths}}$	
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)	$\frac{2}{3} = 160$ $1 = 160$ $1 = \frac{160}{1} \times \frac{3}{2}$ $= \mathbf{240 \text{ students}}$	
24.	There are 4 more girls than boys in a class of 40 pupils. What percentage of the class are girls? Answer: _____ (2)	$40 - 4 = 36$ $36 \div 2 = 18$ $\text{Girls} = 18 + 4$ $= 22$ $\text{Percentage} = \frac{22}{40} \times \frac{100}{1}$ $=$	
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)	$X + Y = 36$ $X - Y = 24$ $36 = 6 + 30$ $24 = 30 - 6$ \therefore $\mathbf{6 \ \& \ 30 \ \text{are the two numbers}}$	

26. In a football tournament, points were awarded as follows.

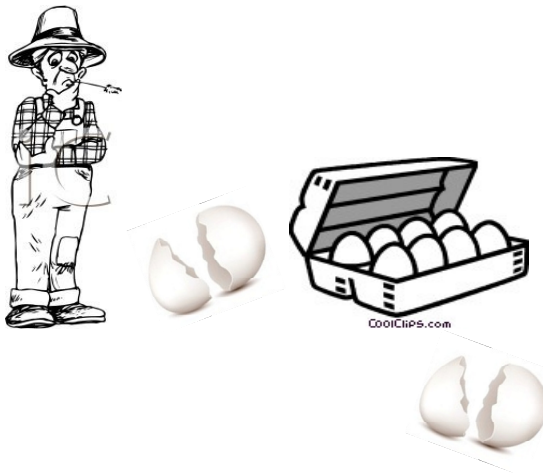
Win	3 points
Draw	1 point
Loss	0 points

At the end of 5 matches a team had 7 points.
It drew 1 match only.
How many matches did the team lose?

Answer: _____ (3)

$$\begin{aligned}
 &5 \text{ matches} \\
 &\text{Drew} = 1 \\
 &7 - 1 = 6 \\
 &\text{Won} = 6 \div 3 \\
 &= 2 \\
 &\text{Total matches played} = 5 \\
 &\text{Loss} = 5 - (2 + 1) \\
 &= 5 - 3 \\
 &= \mathbf{2 \text{ matches lost}}
 \end{aligned}$$

27. An egg vendor transported 360 eggs to the market. While transporting the eggs, 10% of them broke.



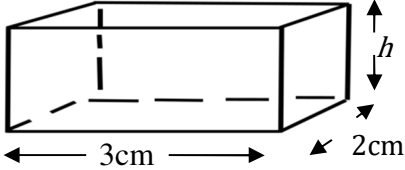

a) How many eggs were broken?



Answer: _____ eggs (1)

b) All the good eggs were packed into crates of 12. How many crates were used to pack these eggs?


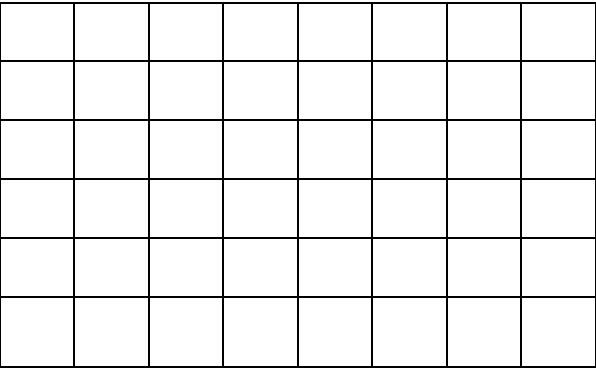
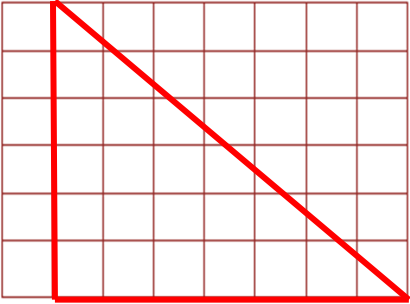
Answer: _____ crates (2)

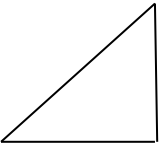
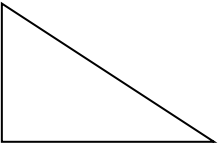


$$\begin{aligned}
 \text{(a) Broken} &= 10\% \times 360 \\
 &= \mathbf{36 \text{ eggs broken}} \\
 \text{(b) Good eggs} &= 360 - 36 \\
 &= 324 \\
 \text{Crates} &= 324 \div 12 \\
 &= \mathbf{27 \text{ crates}}
 \end{aligned}$$

<p>28.</p>	<p>Five years ago, Leslie was $\frac{3}{8}$ 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 $= 37 - 5$ $= 32$ years \therefore Leslie was $= \frac{3}{8} \times \frac{32}{1}$ $= 12$ Now Leslie $= 12 + 5$ $= 17$ years</p>	
<p>29.</p>	<p>The volume of a cuboid shown below is 48 cm^3.</p>  <p>Calculate the height of the cuboid.</p> <p>Answer: _____ (2)</p>	<p>Height of cuboid $= \frac{\text{Volume}}{\text{L} \times \text{W}}$ $= \frac{48 \text{ cm}^3}{3 \times 2}$ $= \frac{48 \text{ cm}^3}{6}$ $= 8 \text{ cm}$</p>	
<p>30.</p>	<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 $= \text{L} \times \text{W}$ $= 25 \times 16$ $= 400 \text{ m}^2$</p> <p>Area of 4 beds $= 4 (\text{L} \times \text{W})$ $= 4 \times (9 \times 8)$ $= 4 \times 72$ $= 288 \text{ m}^2$</p> <p>Area of land NOT planted $= 400 \text{ m}^2 - 288 \text{ m}^2$ $= 112 \text{ m}^2$</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 = 30° 9 spaces = $30^{\circ} \times 9$ = 270°</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 = $\\$100 \div 2$ 5 broken lines = $5 \times (\\$100 \div 2)$ = $5 \times \\$50$ = \$250</p>	

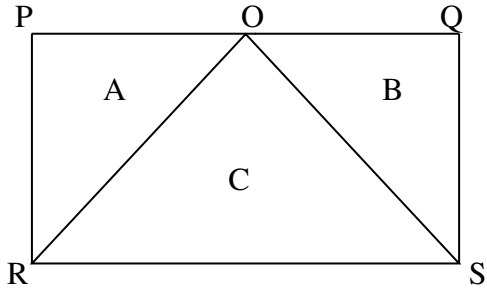
<p>33.</p>	<p>The table below shows the rates a telephone company charges its customers for use of its land line telephones.</p> <p>.....</p> <p>(a) Fixed monthly rental \$29.00 (b) For the first 300 minutes, \$0.18 per minute (c) Over 300 minutes, \$0.10 per minute</p> <p>*****</p> <p>If a customer used his telephone for 375 minutes for the month of July, Calculate his telephone bill for that month.</p> <p>Answer _____ (3)</p>	<p>Total minutes = 375 First 300 = 300 x \$0.18 = \$54 Balance = 375 – 300 = 75 Over 300 = 75 x \$0.10 = \$7.50</p> <p>Total for month of July = \$29.00 + \$54.00 + \$7.50 = \$90.50</p>	
<p>34.</p>	<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 FRACTION of gasoline did the car use for Jesel’s daily trip?</p> <p>Answer _____ (2)</p>	<p>(a) $0.375 = \frac{3}{8}$ $\frac{3}{8} \times \frac{40}{1}$ = 15 litres</p> <p>(b) Sangre Grande = 17 Daily POS trip = 17 + 15 = 32 litres</p> <p>Fraction used = $\frac{32}{40}$ = $\frac{4}{5}$</p>	

<p>35.</p>	<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 fraction 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 = \$30</p> <p>(b) Profit Fraction = $\frac{30}{42}$ = $\frac{5}{7}$</p>	
<p>36.</p>	<p>In the grid below draw an ISOSCELES triangle with an area of 24cm².</p> <p> = 1cm²</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 = 82×5 $= 410$ $5^{\text{th}} \text{ test} = 410 - (90 + 48 + 89 + 98)$ $= 410 - 325$ $= 85$</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: 300px; height: 150px; margin: 10px 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) A/B was flipped to form the parallelogram (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 24cm^2 .
What is the **area** of the rectangle PQRS?

Answer _____ (2)

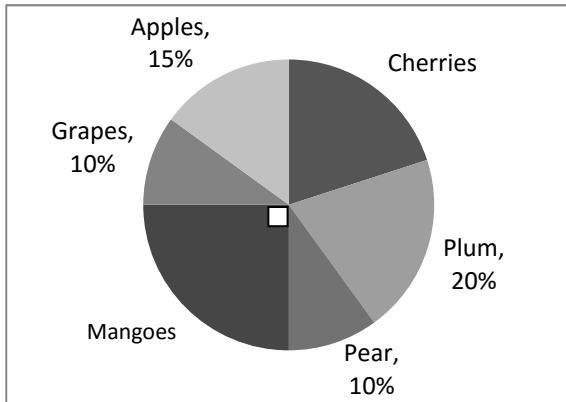
- (b) Calculate the length of the rectangle, if the width is 6cm.

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 $33\frac{1}{3}\%$ more than Jake.</p> <p>(a) How much money did each child get?</p> <p>Answer: Jake _____</p> <p style="padding-left: 100px;">Sofia _____ (2)</p> <p>(b) Sofia spent $\frac{1}{5}$ of her money on a necklace and $\frac{1}{4}$ of the remainder on a watch. Calculate how much money she had left.</p> <p>Answer _____ (3)</p>	<p>(a) $33\frac{1}{3}\% = \frac{1}{3}$</p> <p>$\frac{1}{3} \times \frac{300}{1} = \\100</p> <p>$\\$300 - \\$100 = \\$200$</p> <p>$\\$200 \div 2 = \\$100$</p> <p>Jake = \$100</p> <p>Sofia = \$200 (\$100 + \$100)</p> <p>(b) Necklace = $\frac{1}{5} \times \frac{200}{1}$</p> <p style="padding-left: 40px;">= \$40</p> <p>Remainder = $\\$200 - \\40</p> <p style="padding-left: 40px;">= \$160</p> <p>Watch = $\frac{1}{4} \times \frac{160}{1}$</p> <p style="padding-left: 40px;">= \$40</p> <p>Money Left = $\\$160 - \\40</p> <p style="padding-left: 40px;">= \$120</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.

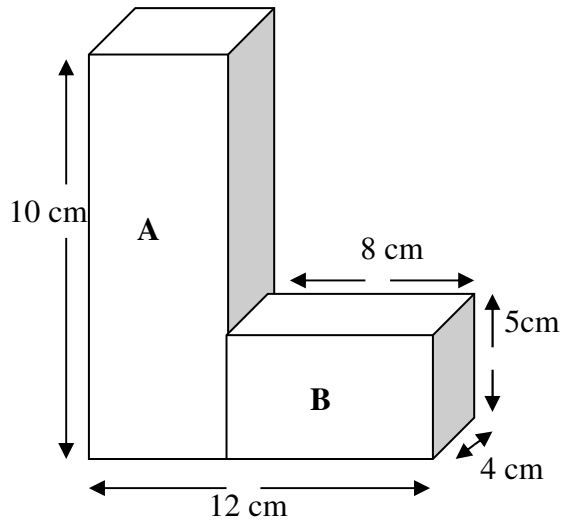
Answer _____ (2)

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

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

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

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



- (a) Calculate the volume of box B.

Answer _____ 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 _____ cm^3 (2)

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

Answer _____ cubes (2)

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

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

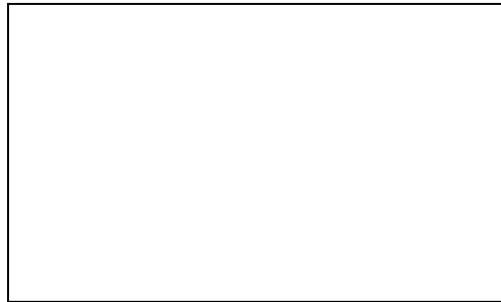
$$\begin{aligned} \text{Volume of boxes} &= 160 + 160 \\ &= \mathbf{320\text{cm}^3} \end{aligned}$$

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

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)

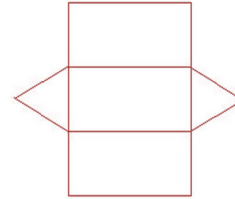
(c) Seven identical triangular prisms of base 10cm are put together to form a straight line.

What is the total length of the combined triangular prisms?

Answer _____ (2)

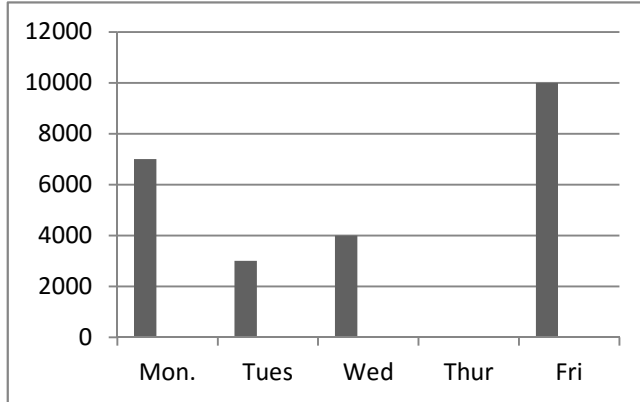
(a) **Triangular faces**
3 rectangular faces

(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)

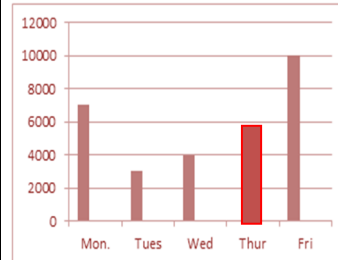
(d) How many more newspapers were sold on Monday than on Tuesday?

Answer _____ (1)

(a) Thursday
 $= 30\,000 - (7\,000 + 3\,000 + 4\,000 + 10\,000)$

$= 30\,000 - 24\,000$
 $= 6\,000$

(b)



(c) Friday

(c) Difference
 $= 7\,000 - 3\,000$
 $= 4\,000$

END OF TEST 15