

Questions 1 to 10 carry 1 mark each. Questions 11 to 15 carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and shade your answer on the Optical Answer Sheet (OAS). (20 marks)

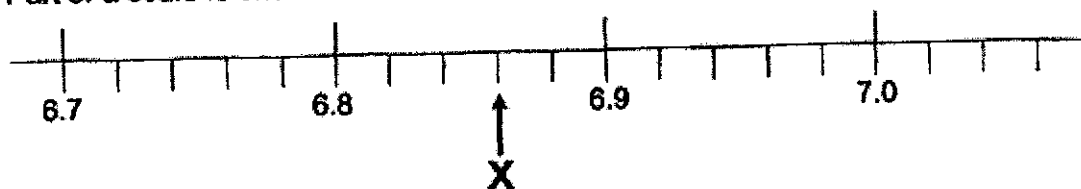
1. Arrange the following fractions from the smallest to the largest:

$$\frac{3}{2}, \quad \frac{6}{5}, \quad 1\frac{1}{7}$$

- | | Smallest | | Largest |
|-----|------------------|------------------|----------------|
| (1) | $\frac{3}{2}$, | $1\frac{1}{7}$, | $\frac{6}{5}$ |
| (2) | $\frac{3}{2}$, | $\frac{6}{5}$, | $1\frac{1}{7}$ |
| (3) | $\frac{6}{5}$, | $\frac{3}{2}$, | $1\frac{1}{7}$ |
| (4) | $1\frac{1}{7}$, | $\frac{6}{5}$, | $\frac{3}{2}$ |

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2. Part of a scale is shown below. What is the value of the reading at X?



- (1) 6.83
 (2) 6.86
 (3) 6.88
 (4) 7.10

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3. Find the value of $40 + 4 \times (8 - 6)$.

- (1) 5
 (2) 20
 (3) 36
 (4) 74

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4. The diagram shows a calculator.
Which of the following could be the mass of this calculator?



- (1) 1 g
- (2) 10 g
- (3) 100 g
- (4) 1000 g

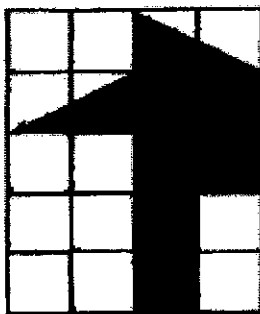
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5. In a school, the ratio of the number of boys to the number of girls is 5 : 9. What is the ratio of the number of girls to the total number of children in the school?

- (1) 5 : 9
- (2) 5 : 14
- (3) 9 : 5
- (4) 9 : 14

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6. A picture is drawn on a square grid.

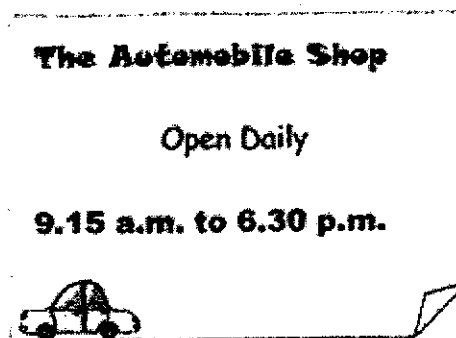


What percentage of the square grid is shaded?

- (1) 8%
- (2) 16%
- (3) 40%
- (4) 60%

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7. The opening hours of a shop are shown below. How long does the shop open each day?



- (1) 3 h 15 min
 (2) 3 h 45 min
 (3) 9 h 15 min
 (4) 9 h 45 min

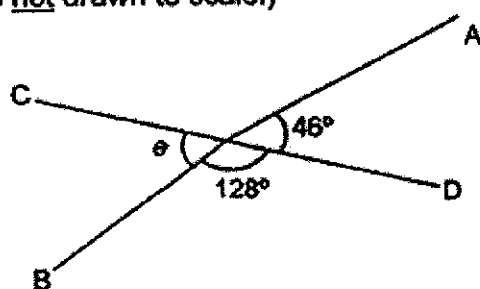
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8. Express $\frac{3}{8}$ as a decimal.

- (1) 0.125
 (2) 0.375
 (3) 0.625
 (4) 0.875

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9. In the figure below, CD is a straight line. Find $\angle e$.
 (The figure is not drawn to scale.)



- (1) 46°
 (2) 52°
 (3) 58°
 (4) 134°

()

10.

Electric scooter for Rent

First hour : \$12
Every additional $\frac{1}{2}$ hour: \$4



Miss Lim rented a scooter for 3 hours. How much did she pay?

- (1) \$16
- (2) \$20
- (3) \$24
- (4) \$28

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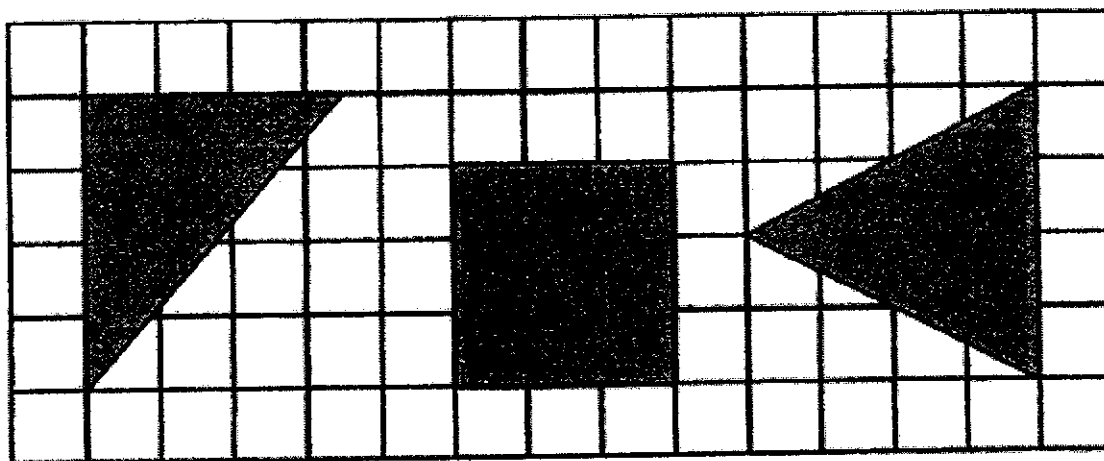
11. Highlighters are only sold in packets of 6. Each packet is sold at \$9.
Mrs Tan has \$50. How many highlighters can she buy at most?



- (1) 30
- (2) 33
- (3) 35
- (4) 36

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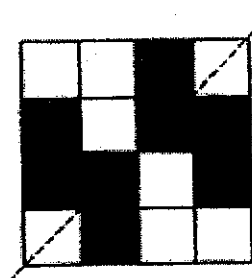
12. In the square grid below, A is a right-angled triangle, B is a square and C is another triangle. Arrange A, B and C from the largest to the smallest area.



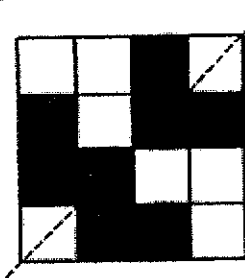
- | | <u>Largest</u> | | <u>Smallest</u> |
|-----|----------------|----|-----------------|
| (1) | A, | B, | C |
| (2) | A, | C, | B |
| (3) | B, | C, | A |
| (4) | C, | A, | B |
- ()

13. Each figure below is made up of 16 squares.
8 squares in each figure are shaded.

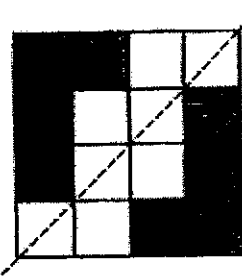
Which of the following is a symmetric figure?



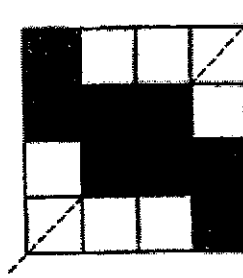
(1)



(2)



(3)



(4)

()

14. The table below shows the number of students in a Primary 5 class. Some of the information is missing.

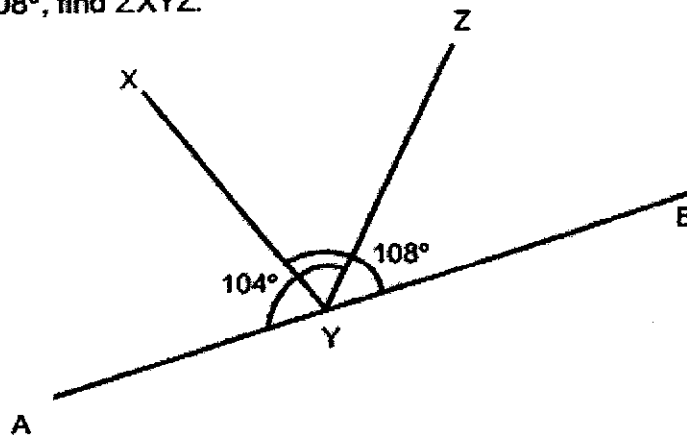
	With CCA	Without CCA	Total
Boys	10		
Girls	15	5	20
Total	25	11	36

Based on the given information, what is the ratio of the number of girls without CCA to the number of boys without CCA in the Primary 5 class?

- (1) 5 : 6
 (2) 6 : 5
 (3) 5 : 11
 (4) 6 : 11

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15. In the figure below, AYB is a straight line. Given that $\angle AYZ = 104^\circ$ and $\angle XYB = 108^\circ$, find $\angle XYZ$.



- (1) 76°
 (2) 72°
 (3) 32°
 (4) 4°

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Questions 16 to 20 carry 1 mark each. Write your answers in the spaces provided.
For questions which require units, give your answers in the units stated. (5 marks)

Do not write
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16. Express 1005 grams in kilograms.

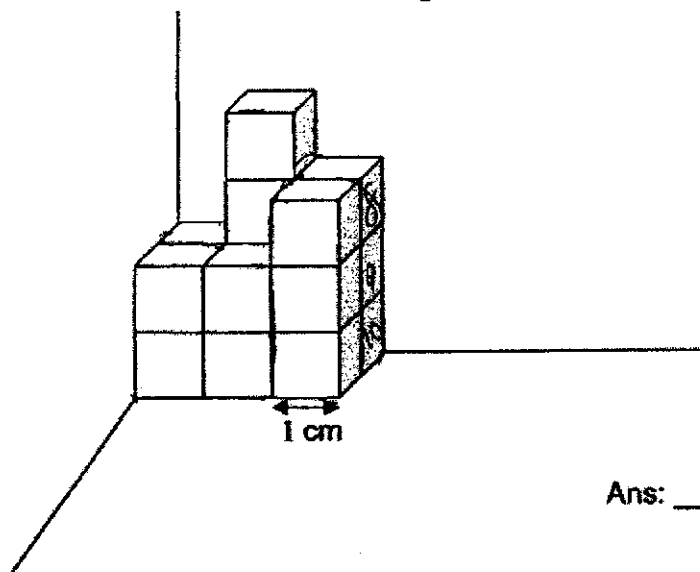
Ans: _____ kg

17. What is the missing number in the box?

$$\frac{8}{12} = \frac{\boxed{}}{9}$$

Ans: _____

18. The solid figure below is made up of unit cubes.
What is the volume of the solid figure?



Ans: _____ unit cubes

Subtotal	/ 3
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19. Find the value of 2.3×200 .

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Ans: _____

20. The table below shows Caili's scores for 4 games she played.

Game	1	2	3	4
Score	5	0	9	10

Find the average score for the 4 games she played.

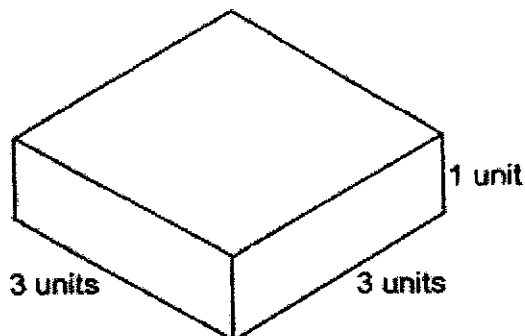
Ans: _____

Subtotal	/ 2
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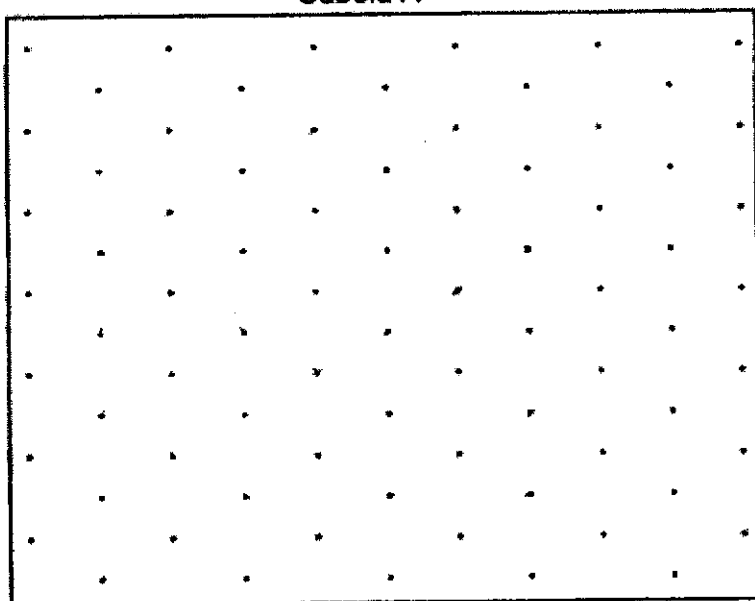
Questions 21 to 30 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (20 marks)


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21. The figure below shows Cuboid A. Draw a cuboid with a volume twice that of Cuboid A on the isometric grid provided.



Cuboid A



22. Sally bought a roll of stickers with pictures as shown in the following sequence. The roll of stickers has 249 stickers. How many of her stickers have the picture of an apple, ?



Ans: _____

Subtotal

/ 4

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23. (a) Find the value of $\frac{3}{4} - \frac{2}{5}$.

Give your answer in the simplest form.

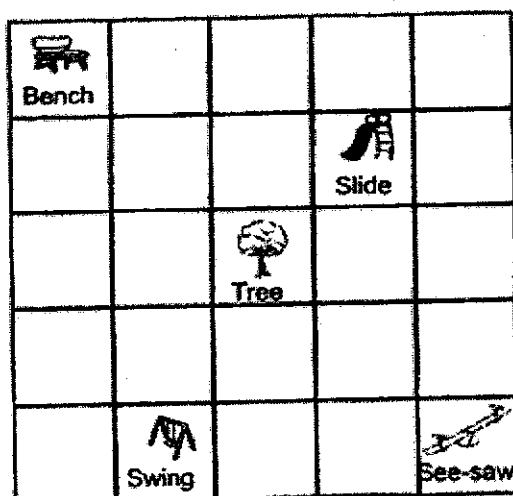
- (b) Find the value of $\frac{9}{10} \times \frac{2}{3}$.

Give your answer in the simplest form.

Ans: (a) _____

(b) _____

24. The square grid below shows the plan of a playground in a school.



- (a) Which object is North-East of the Tree?

- (b) Which direction is the Swing from the See-saw?

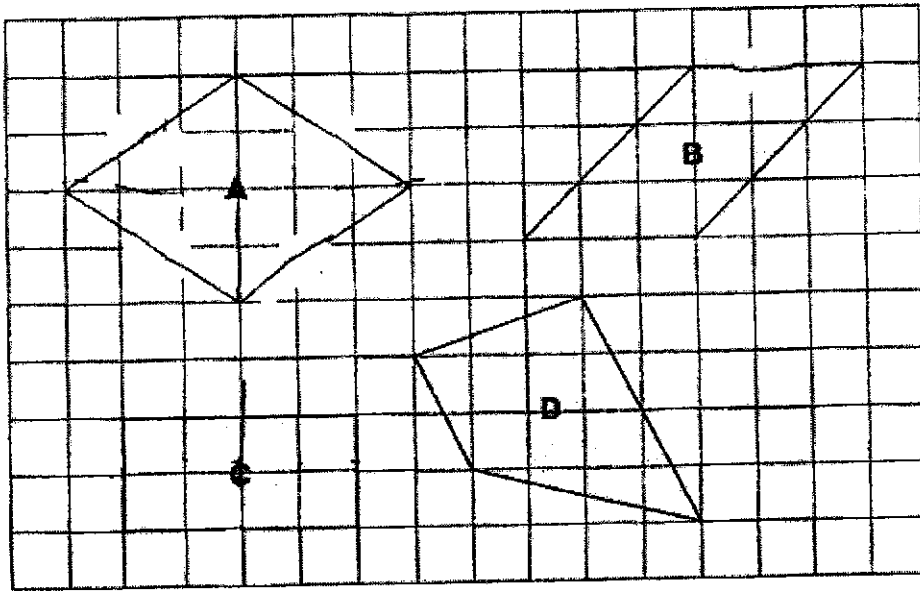
Ans: (a) _____

(b) _____

Subtotal	4	14
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25. Four figures, A, B, C and D are drawn on a square grid.

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Which 2 figures have more than one line of symmetry?

Ans: Figures _____ & _____

26. (a) Express 5% as a decimal.

- (b) Express 12 minutes as a percentage of 1 hour.

Ans: (a) _____

(b) _____ %

Subtotal

/ 4

Do not write
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27. Faith saved \$240 last month. Her mother decided to give her \$2 for every \$10 she saved. How much did Faith's mother give her?

Ans: \$ _____

28. The table below shows the rate of parking charges in a carpark.

Parking Charges	
First hour	\$1.30
Every subsequent 30 minutes or part thereof	\$0.80

Daniel parked his car in the carpark from 3 p.m. to 5.20 p.m.
How much did he pay?

Ans: \$ _____

Subtotal	/ 4
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Do not write

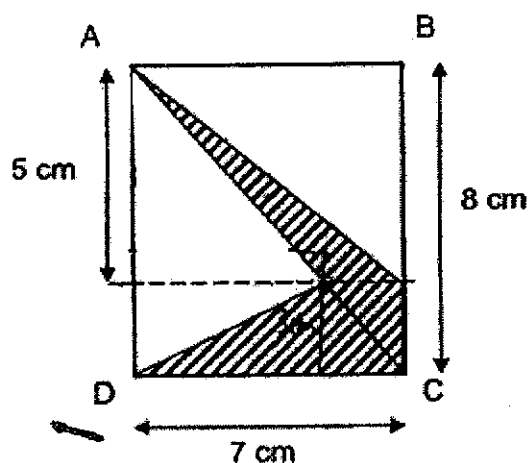
Questions 1 to 5 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

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1. In an aquarium, there were 1080 goldfish and guppies. The ratio of the number of guppies to the number of goldfish was 5 : 4. How many goldfish were left after 30 goldfish were sold?

Ans: _____

2. ABCD is a rectangle. Find the area of the shaded part.

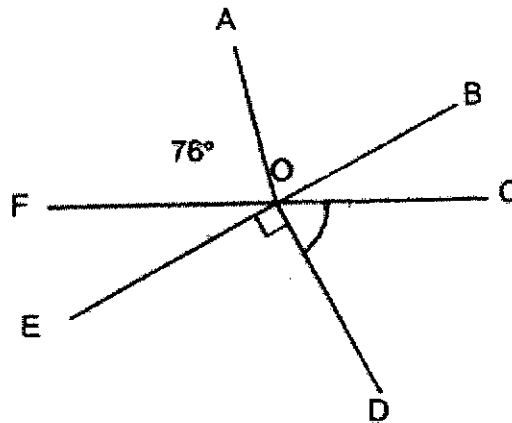


Ans: _____ cm²

Subtotal	/ 4
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3. In the figure below, not drawn to scale, BE and CF are straight lines. $\angle AOF = \angle AOB$. Find $\angle COD$.



Ans: _____°

4. Glenda bought some flowers for her teachers on Teachers' Day. If she gave each teacher 4 flowers, there were 3 flowers left over. If she gave each teacher 6 flowers, she would be short of 1 flower. What was the smallest possible number of flowers that Glenda had?

Ans: _____

Subtotal

/ 4

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5. Mr Faizal cycles $7\frac{2}{5}$ km at a nearby park connector every weekend. His wife cycles 4 km less than him. What is the total distance that both of them cover together?

Ans: _____ km

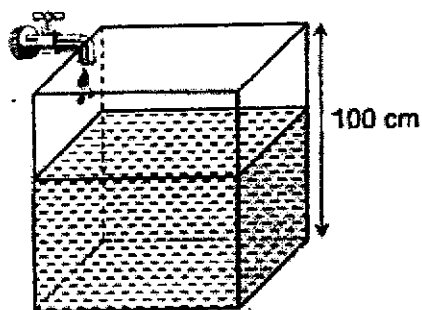
Subtotal	/ 2
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For questions 6 to 17, show your working clearly and write your answers in the spaces provided. The number of marks available is shown in brackets [] at the end of each question or part-question. (45 marks)

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6. The figure below shows a cubical tank which is $\frac{3}{5}$ -filled with water.

- (a) What is the volume of water needed to fill up the tank to the brim?
(b) Water is added to the tank at a rate of 4 litres per minute. At this rate, how long will it take to fill the tank completely?



Ans: (a) _____ [2]

(b) _____ [1]

Subtotal

/ 3

7. The usual price of a toaster was \$260. During a sale, a discount of 10% was given.

(a) How much was the discounted price?

(b) Mr Tan bought the toaster during the sale. However, he also had to pay a GST of 7% on the discounted price. How much did he pay for the toaster?

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Ans: (a) _____ [1]

(b) _____ [2]

8. The table below shows the charges for water usage.

Volume of water	Charge
First 40 m ³	\$1.17 per m ³
Above 40 m ³	\$1.40 per m ³

Mrs Lee's family used 66 m³ of water in September. How much did her family pay for the water used?

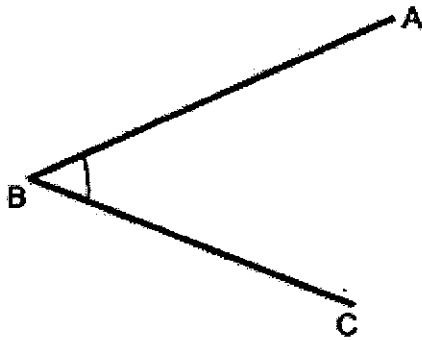
Ans: _____ [3]

Subtotal

/ 6

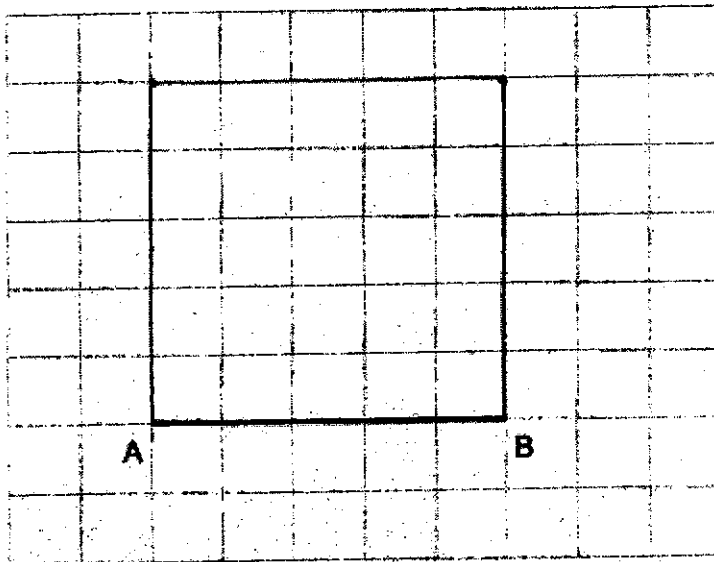
9. (a) In the space below, AB and BC are straight lines. Measure $\angle ABC$.

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Ans: (a) _____ [1]

- (b) On the square grid below, AB is a straight line. Draw a square ABCD. [2]



Subtotal	/ 3
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10. The average mass of 3 children, Xavier, Jeremy and Zen, is 54 kg. Xavier is 60 kg. Jeremy and Zen are of the same mass. How heavy is Zen?

Ans: _____ [3]

11. Alex had twice as many marbles as Benjamin at first. Alex then gave away 33 marbles to another friend. Alex now has 16 more marbles than Benjamin.

- (a) How many marbles does Alex have now?
(b) How many marbles did Alex and Benjamin have at first?

Ans: (a) _____ [2]

(b) _____ [2]

Subtotal	17
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12. Jimmy started saving part of his pocket money by putting 2 coins in a money box every day. Each coin was either a 20¢ or 50¢ coin. His mother also put in a \$1 coin in the box every 7 days. The total value of the coins after 98 days was \$82.30.

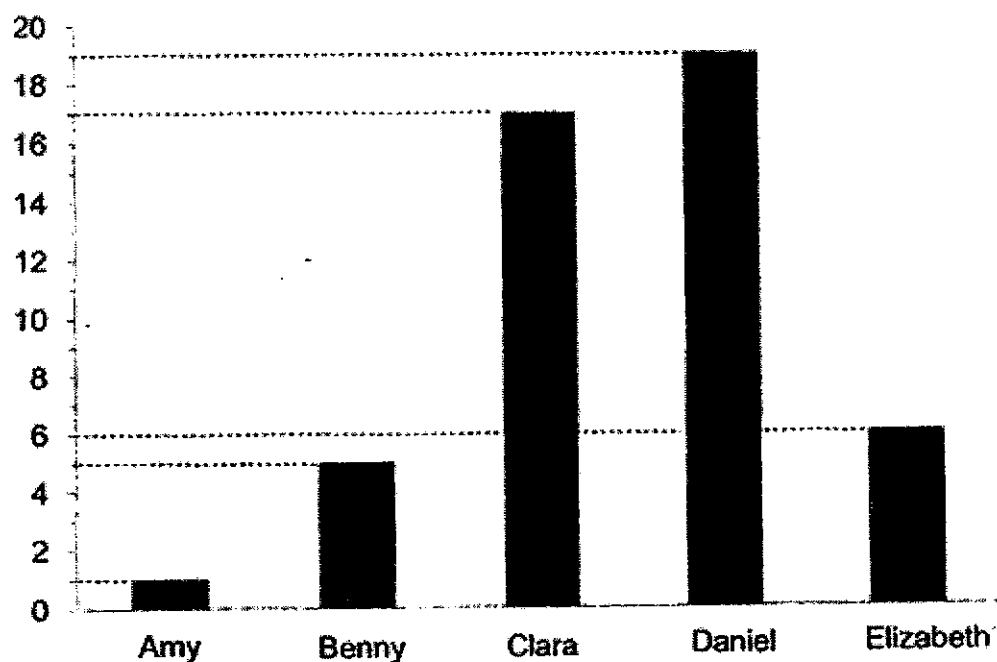
- (a) How many coins were there altogether?
(b) How many of the coins were 50¢ coins?

Ans: (a) _____ [2]

(b) _____ [2]

13. The graph below shows the number of stickers bought by 5 children.

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- (a) What is the total number of stickers bought by the 5 children?
(b) What percentage of all the stickers are bought by Elizabeth?

Ans: (a) _____ [2]

(b) _____ [2]

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14. Auntie Lucy baked 128 pies and some cookies.
She gave away $\frac{3}{8}$ of her pies and $\frac{2}{7}$ of her cookies. She had 155 cookies left.

- (a) How many pies did she give away?
(b) How many cookies did she give away?

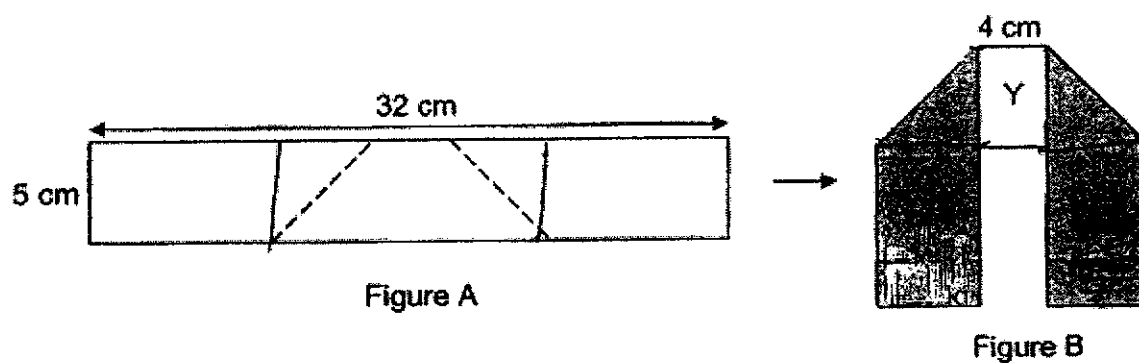
Ans: (a) _____ [2]

(b) _____ [2]



15. Figure A shows a rectangular piece of paper 32 cm by 5 cm which is coloured on one side. It is folded along the dotted line to form Figure B.
- (a) Find the area of the rectangular piece of paper.
- (b) Find the total area of X, Y and Z in Figure B.

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in this space



Ans: (a) _____ [1]

(b) _____ [3]



16. The first four figures of a pattern are shown below.

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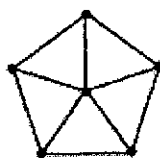


Figure 1

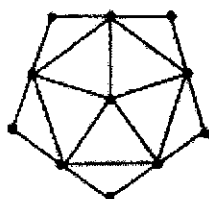


Figure 2

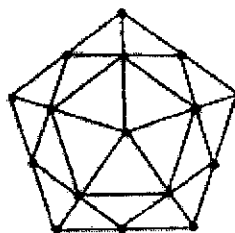


Figure 3

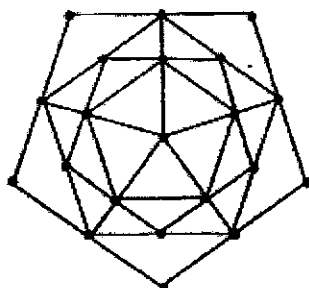


Figure 4

The table shows the number of dots and the number of non-overlapping triangles for each figure.

Figure number	Number of dots	Number of non-overlapping triangles
1	6	5
2	11	10
3	16	20
4	21	25
5	(i) _____	(ii) _____

- (a) Fill in the table for Figure 5.
 (b) What is the number of dots in Figure 10?
 (c) In which Figure number will there be 106 dots?

Ans: (a) (i) _____ [1]

(ii) _____ [1]

(b) _____ [1]

(c) _____ [2]



17. There were 38 pupils in a class. Each of them contributed \$10 towards a charity drive. The form teacher contributed \$70.

$\frac{2}{5}$ of the total amount contributed was spent on buying food items.

$\frac{1}{9}$ of the remainder was spent on stationery.

After spending some money on toiletries, there was \$93 left.

- (a) What was the total amount contributed?
(b) How much was spent on toiletries?

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in this space

Ans: (a) _____ [2]

(b) _____ [3]



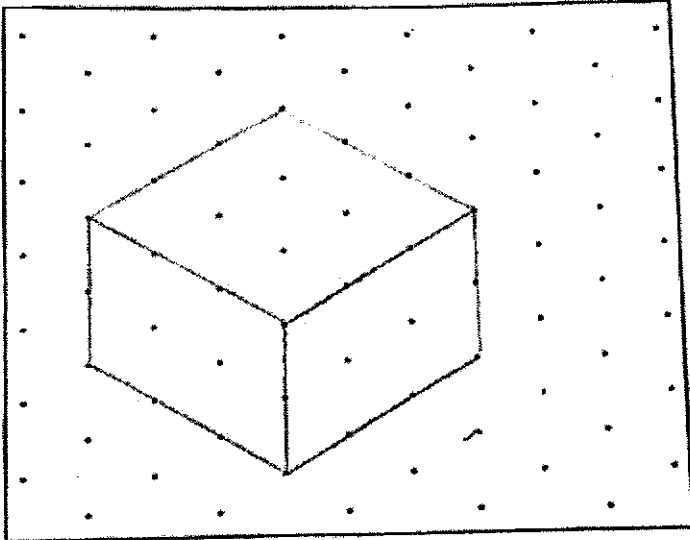
— End of Paper 2 —

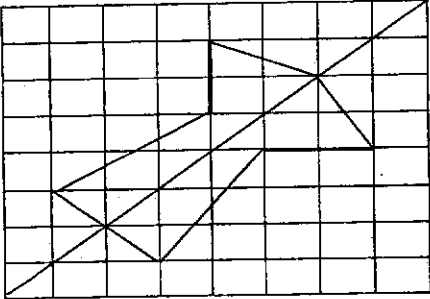
PAPER 1 BOOKLET A

Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
4	2	2	3	4	3	3	2	2	4

Q 11	Q12	Q13	Q14	Q15
1	3	2	1	3

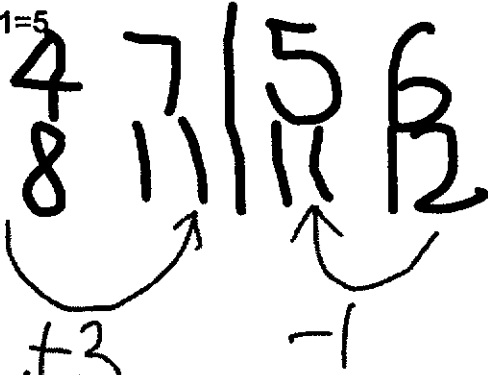
PAPER 1 BOOKLET B

Q16)	1.005kg
Q17)	6
Q18)	16
Q19)	460
Q20)	6
Q21)	
Q22)	$249 \div 5 = 49R4$

	$49+1=50$ Ans:50
Q23)	a) $7/20$ b) $3/5$
Q24)	a) Slide b) West
Q25)	A&C
Q26)	a) 0.05 b) 20%
Q27)	$240 \div 10 = 24$ $24 \times 2 = 48$ Ans: \$48
Q28)	$0.8 \times 2 = 1.6$ $1.3 + 1.6 = 2.9$ $2.9 + 0.8 = 3.7$ Ans: \$3.70
Q29)	
Q30)	$20 - 12 = 8$ $48 \div 8 = 6$ $6 \times 20 = 120$ Ans:120 students

PAPER 2

Q1)	guppies:goldfish 5:4 Total $\rightarrow 9u$ $1u \rightarrow 1080 \div 9 = 120$ $4u \rightarrow 120 \times 4 = 480$ $480 - 30 = 450$ Ans: 450 goldfish
Q2)	$8 - 5 = 3$ $1/2 \times 3 \times 3 = 10.5$ $1/2 \times 3 \times 3 = 10.5$ $10.5 \times 2 = 21$ Ans: 21cm

Q3)	$76+76=152$ $180-152=28$ $152+28+28+90=298$ $360-298=62$ Ans: 62°
Q4)	$4+3=7$ $6-1=5$  Ans: 11
Q5)	$7\frac{2}{5} - 4 = 3\frac{2}{5}$ $7\frac{2}{5} + 3\frac{2}{5} = 10\frac{4}{5}$ Ans: $10\frac{4}{5}$ km
Q6)	<p>a)</p> $1 - \frac{3}{5} = \frac{2}{5}$ $100 \times \frac{2}{5} = 40$ $100 \times 100 \times 40 = 400000$ 400000ml of water is needed to fill up the tank. <p>b)</p> $400000 \div 4000 = 100$ It will take 100 minutes for the tank to be filled completely.
Q7)	<p>a)</p> $100\% \rightarrow 260$ $10\% \rightarrow 260 \div 10$ $= 26$ $200 - 26 = 174$ The discounted price was \$174. <p>b)</p> $100\% \rightarrow 234$ $7\% \rightarrow 234 \div 100 \times 7$ $= 16.38$ $234 + 16.38 = 250.38$

	He paid \$250.38 for the toaster.																																																								
Q8)	$66 - 40 = 26$ $1.17 \times 40 = 46.80$ $1.4 \times 26 = 36.40$ $46.80 + 36.40 = \$83.20$																																																								
Q9)	a) 45° b) <table border="1"><tr><td>D</td><td></td><td></td><td></td><td></td><td></td><td></td><td>C</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>A</td><td></td><td></td><td></td><td></td><td></td><td></td><td>B</td></tr></table>	D							C																																									A							B
D							C																																																		
A							B																																																		
Q10)	$54 \times 3 = 162$ $162 - 60 = 102$ $102 \div 2 = 51$ Zen is 51kg																																																								
Q11)	A <table border="1"><tr><td></td><td>16</td><td>33</td></tr></table> B <table border="1"><tr><td></td></tr></table> a) $33 + 16 = 49$ $49 + 16 = 65$ Alex has 49 marbles. b) $49 \times 3 = 147$ They have 147 marbles at first.		16	33																																																					
	16	33																																																							
Q12)	a) No. of 1 dollar coins = $98 \div 7$ = 14 No. of 20¢ and 50¢ = 98×2 = 196 $196 + 14 = 210$. There were 210 coins.																																																								

	<p>b)</p> <p>Value of 20¢ and 50¢ = $82.30 - 14$ = 68.30</p> <table border="1" data-bbox="336 358 1409 562"> <tr> <th>20¢</th> <th>Cost</th> <th>50¢</th> <th>Cost</th> <th>Total</th> <th>✓/X</th> </tr> <tr> <td>98</td> <td>98×0.20 = 19.6</td> <td>98</td> <td>98×0.50 = 49</td> <td>$19.6 + 49$ = 68.60</td> <td>X</td> </tr> <tr> <td>99</td> <td>99×0.20 = 19.8</td> <td>97</td> <td>99×0.50 = 48.5</td> <td>$19.8 + 48.5$ = 68.30</td> <td>✓</td> </tr> </table> <p>97 of the coins were 50¢ coins.</p>						20¢	Cost	50¢	Cost	Total	✓/X	98	98×0.20 = 19.6	98	98×0.50 = 49	$19.6 + 49$ = 68.60	X	99	99×0.20 = 19.8	97	99×0.50 = 48.5	$19.8 + 48.5$ = 68.30	✓
20¢	Cost	50¢	Cost	Total	✓/X																			
98	98×0.20 = 19.6	98	98×0.50 = 49	$19.6 + 49$ = 68.60	X																			
99	99×0.20 = 19.8	97	99×0.50 = 48.5	$19.8 + 48.5$ = 68.30	✓																			
Q13)	<p>a)</p> <p>$1 + 5 + 17 + 19 + 6 = 48$ The total number is 48.</p> <p>b)</p> <p>$100\% \rightarrow 48$ $1\% \rightarrow 48 \div 100$ $= 0.48$ $6 \div 0.48 = 12.5\%$ 12.5% are bought by Elizabeth.</p>																							
Q14)	<p>a)</p> <p>$8U \rightarrow 128$ $1U \rightarrow 128 \div 8$ $= 16$ $3U \rightarrow 16 \times 3$ $= 48$ She gave away 48 pies.</p> <p>b)</p> <p>$5U \rightarrow 155$ $1U \rightarrow 155 \div 5$ $= 31$ $2U \rightarrow 31 \times 2$ $= 62$ She gave away 62 cookies.</p>																							
Q15)	<p>a)</p> <p>$32 \times 5 = 160$ The area is 160cm^2</p> <p>b)</p> <p>$32 - 4 = 28$ $9 \times 5 = 45$ $45 \times 2 = 90$ $\frac{1}{2} \times 5 \times 5 = 12.5$</p>																							

	$12.5 \times 2 = 25$ $25 + 90 = 115$ $4 \times 5 = 20$ $20 + 115 = 135$ The total area is 135cm^2 .
Q16)	<p>a)</p> <p>i) $21 + 5 = 26$ ii) $25 + 10 = 35$</p> <p>b)</p> <p>$10 - 1 = 9$ $9 \times 5 = 45$ $45 + 6 = 51$</p> <p>c)</p> <p>$106 - 6 = 100$ $100 \div 5 = 20$ $20 + 1 = 21$</p>
Q17)	<p>a)</p> <p>$38 \times 10 = 380$ $380 + 70 = \\$450$</p> <p>b)</p> <pre> graph LR A[450] --> B["450 x 3/5 = \$270"] A --> C["450 x 2/5 = \$180"] B --> D["8/9"] B --> E["1/9 x 270 = \$30"] D --> F["toiletries"] D --> G["\$94 (left)"] </pre> <p>$180 + 30 = 210$ $450 - 210 = 240$ $240 - 93 = \\$147$</p>