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Anglo-Chinese School (Junior)

PRELIMINARY EXAMINATION (2023)

PRIMARY 6
MATHEMATICS
PAPER 1
(Booklet A)

18 August 2023

Total Time for Booklets A and Booklet B : 1 hour

Name: _____ ( ) Class: 6.( )

INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.
4. Use a 2B pencil to shade your answers on the Optical Answer Sheet (OAS).
5. The use of calculators is **NOT** allowed.

This booklet consists of 8 printed pages.

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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.
(20 marks)

---

1 Express 56 hundredths as a decimal.

(1) 0.056

(2) 0.56

(3) 5.6

(4) 56.0

2 Round 84 596 to the nearest thousand.

(1) 80 000

(2) 84 000

(3) 84 600

(4) 85 000

3 Which one of the following fractions is closest to $\frac{1}{2}$?

(1) $\frac{7}{8}+\frac{1}{9}$

(2) $\frac{8}{7}$

(3) $\frac{8}{9}$

(4) $\frac{9}{8}$

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4 How many sixths are there in $2\frac{2}{3}$?

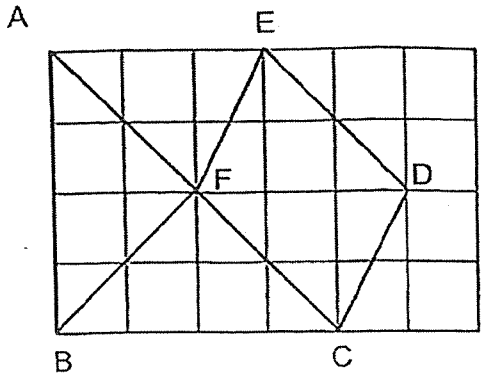
(1) 16

(2) 14

(3) 12

(4) 8

5 Which of the following lines is perpendicular to AC?



(1) AB

(2) CD

(3) ED

(4) FB

6 The average mass of a group of 3 boys is 38 kg. Hashim, whose mass is 42 kg, joined the group. What is the average mass of the new group?

(1) 24 kg

(2) 39 kg

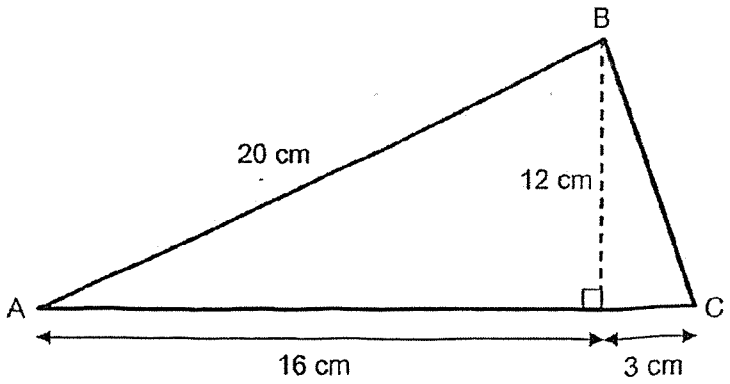
(3) 40 kg

(4) 52 kg

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7 Find the area of triangle ABC shown below.



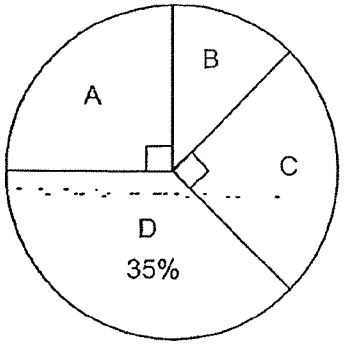
(1) 96 cm^2

(2) 114 cm^2

(3) 190 cm^2

(4) 228 cm^2

8 The pie chart shows how Rory spent his pocket money last month.



He spent $30 more on item D than item C. How much did he spend on item B?

(1) $70

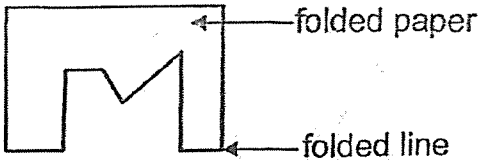
(2) $60

(3) $45

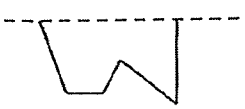
(4) $25

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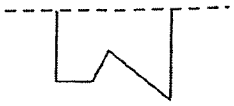
9 A piece of paper is folded and a symmetrical figure is cut out from it.

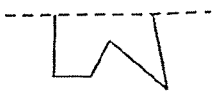


Which one of following shows half of the symmetrical figure that is cut out with the dotted line as the line of symmetry?

(1) 



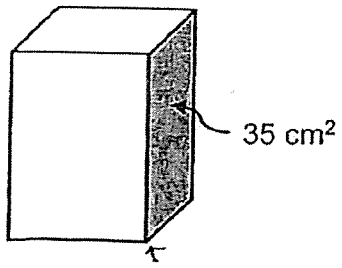
(3) 

(4) 

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10 A cuboid has a square base area of 25 cm². The area of the shaded face is 35 cm².



What is the volume of the cuboid?

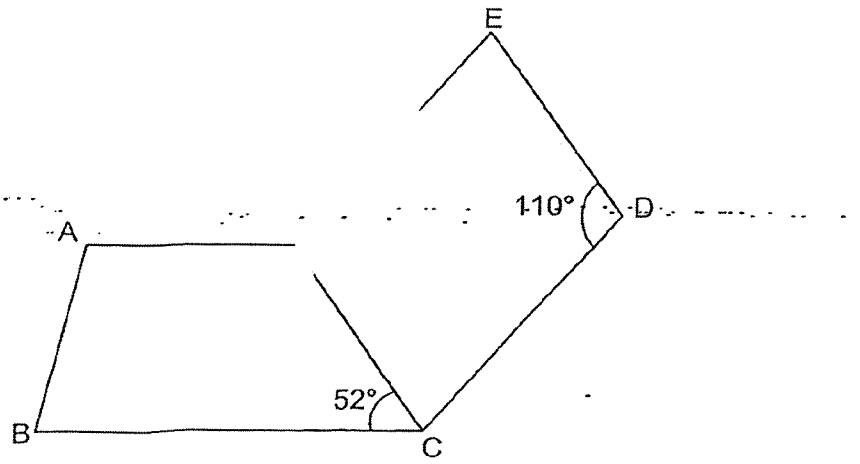
(1) 125 cm³

(2) 175 cm³

(3) 245 cm³

(4) 875 cm³

11 In the figure below, ABCF is a trapezium and CDEF is a parallelogram. AF // BC, ∠EDC = 110° and ∠BCF = 52°. Find ∠AFE.



(1) 122°

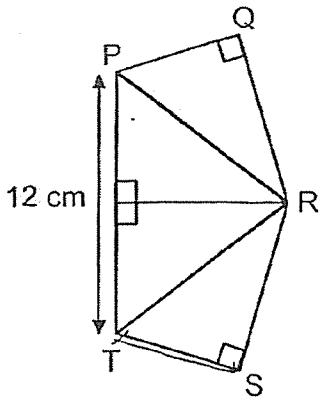
(2) 128°

(3) 140°

(4) 162°

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12 Jonathan used 4 identical right-angled triangles to form a figure PQRST shown below. PT = 12 cm. The perimeter of the figure is 40 cm. Find the area of PQRST.



(1) 48 cm^2

(2) 96 cm^2

(3) 144 cm^2

(4) 192 cm^2

13 The table shows the parking charges for a motorist in a shopping centre.

	7 am to 6 pm	After 6 pm
1st hour	$2.20	$2.50 per entry
Subsequent 30 minutes or part thereof	$1.50	

Mr Lim parked his car from 4 p.m. to 7 p.m. How much parking charges did he pay?

(1) $6.20

(2) $6.90

(3) $7.70

(4) $8.50

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14 There were a total of 800 adults and children at a stadium. 70% of them were adults. Some adults left the stadium and the ratio of the number of adults to the number of children became 5 : 3. How many adults left the stadium?

(1) 60

(2) 70

(3) 160

(4) 210

15 Su Lin and Tina made some necklaces over 2 days. On Monday, Su Lin made 17 more necklaces than Tina. On Tuesday, Su Lin made 30 necklaces and Tina made 11 necklaces. At the end of the 2 days, Tina made $\frac{1}{4}$ of the total number of necklaces. How many necklaces did Su Lin make?

1) 54

2) 57

3) 64

4) 72

End of Booklet A

(Go on to Booklet B)

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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 to the units stated. (5 marks)

16 Find the value of $85 \div 4 \times (15 - 6 \div 3)$.

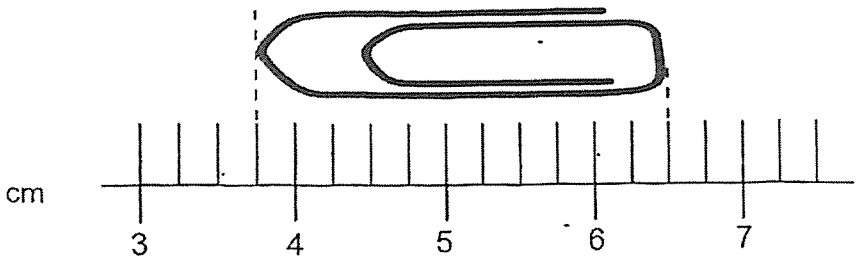
Ans : _____

17 Find the value of $9000 \div 9 + \frac{9}{100} + \frac{9}{1000}$.

Give your answer as a decimal.

Ans : _____

18 What is the length of the clip as shown in the diagram?



Ans : _____ cm

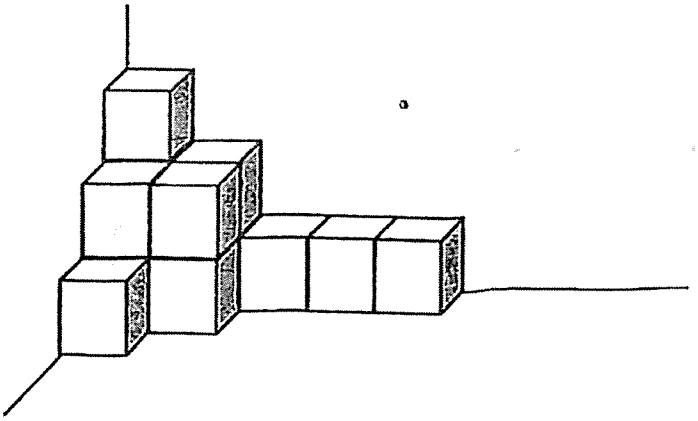
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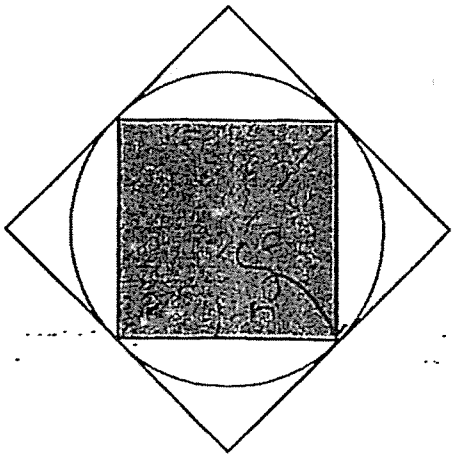
ACSJ

19 The figure below is made up of 1-cm cubes. What is the volume of the figure?



Ans : _____ cm^3

20 The figure below shows a circle drawn inside a square. A shaded square is then drawn inside the circle.



What fraction of the figure is shaded?

Ans : _____

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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 requires units, give your answers in the units stated.

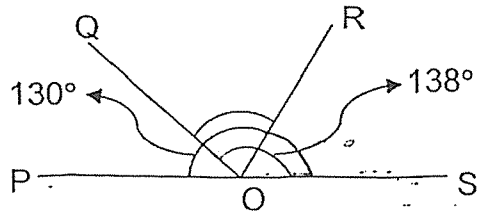
(20 marks)

21 Arrange the following from the smallest to the greatest.

$$\frac{21}{5}\ ,\ 2.15\ ,\ 2\frac{1}{5}$$

Ans: _____ , _____ , _____

22 In the figure, POS is a straight line. $\angle QOS = 138°$ and $\angle POR = 130°$. Find $\angle QOR$.

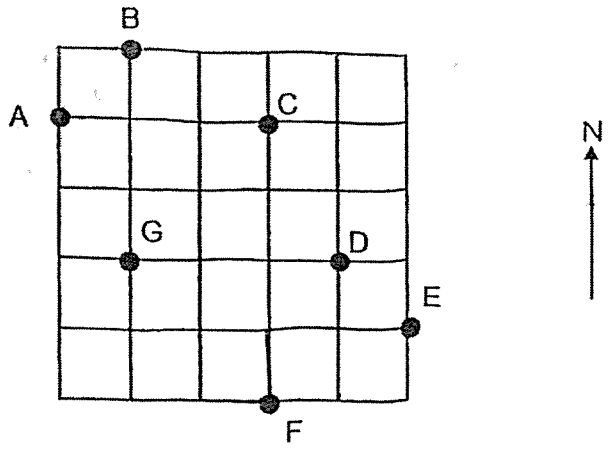


Ans : _____ °

Sub-Total :

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23 The square grid below shows the positions of points A, B, C, D, E, F and G.



(a) In what direction is point E from point B?

Ans : _____

(b) Kayel stood at one of the points facing C. After he turned 45° anti-clockwise, he faced G. Which point was Kayel at?

Ans : Point _____

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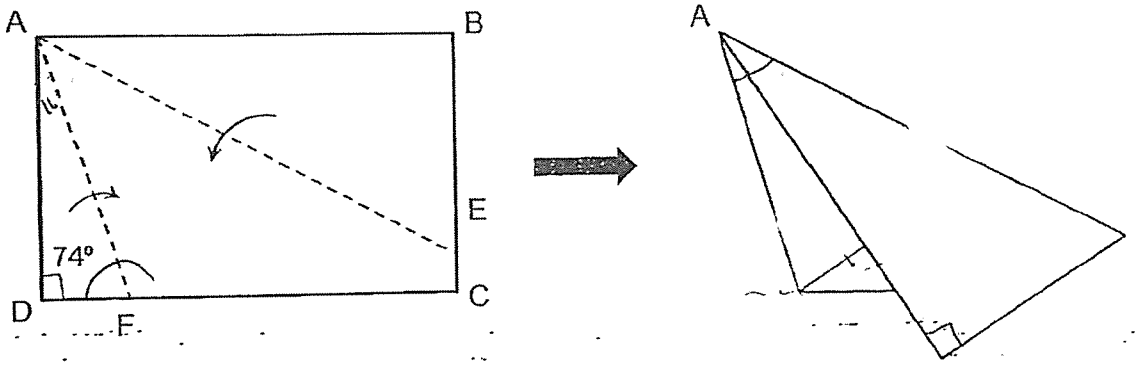
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24 A box with 24 erasers has a mass of 0.67 kg. The same box with 44 similar erasers has a mass of 1.21 kg. Find the mass of 1 eraser. Express your answer in kg.

Ans : _____ kg

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25 Shane had a rectangular piece of paper ABCD. ∠AFD = 74°. He folded it along line AE and AF as shown below. Find ∠y.



Before folding

After folding

Ans : _____ °

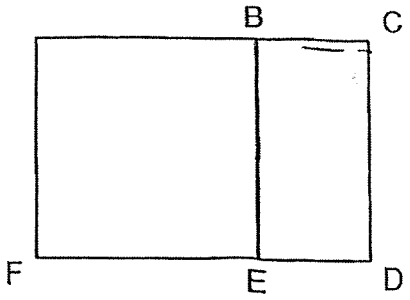
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26 Rectangle ACDF shown below is made up of a square and a rectangle. The perimeter of rectangle ACDF is (2y + 15) cm. The perimeter of the square ABEF is 16 cm.



(a) Find the perimeter of rectangle BCDE in terms of y. Give your answer in its simplest form.

Ans : (a)_____ cm.

(b) Find the perimeter of the rectangle BCDE when $y = 3$.

Ans : (b)_____ cm

Sub-Total :

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27 The table below shows the price of economical rice at four different stalls at a hawker centre.

Food	Lowest Price ($)	Highest Price ($)
A	4.20	8.80
B	6.00	10.30
C	3.70	6.20
D	4.60	12.50

(a) Raymond wanted to buy food from 2 of the stalls. He had $8. Which two stalls could he buy food from?

Ans : (a) Stall_____

and stall_____

(b) Xue Ling had $20. She bought food from one of the stalls and had $9.50 left. Which stall did she buy her food from?

Ans : (b) Stall_____

Sub-Total :

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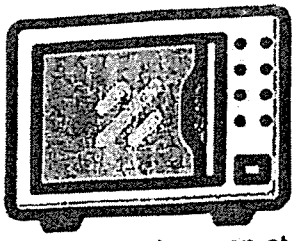
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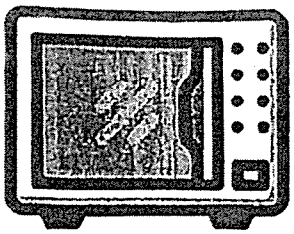
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28

BIG SALE!!!



Buy first toaster oven at
10% discount



Buy second toaster oven at
20% discount

Price of 2nd toaster oven should be equal to or lower than price of 1st toaster oven.

Uncle Jaime bought 2 toaster ovens at the sale. The two toaster ovens were priced at $40 and $60. How much did he pay for the two toaster ovens?

Ans : $_____

Sub-Total :

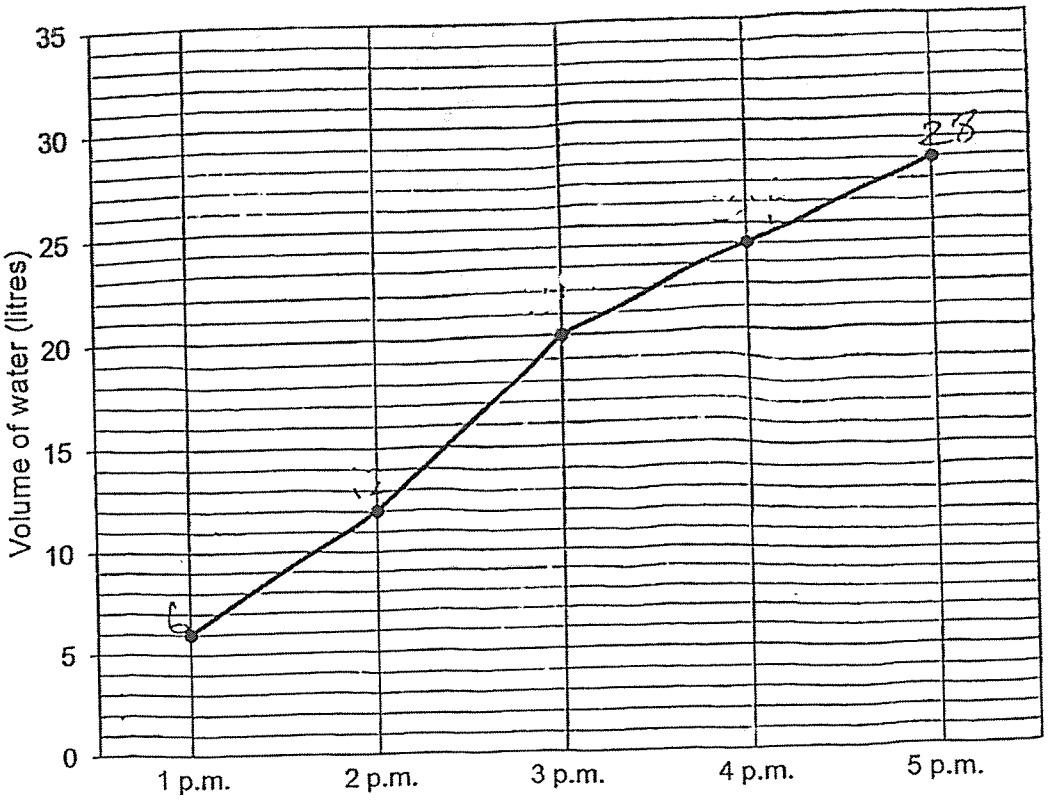
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ACSJ

29 The line graph shows the amount of water in a tank from 1 p.m. to 5 p.m. The tank was 20% filled at 1 p.m. Water flowed into the tank from 1 p.m. to 5 p.m.



(a) During which 1-hour interval was the flow into the tank the greatest?

Ans : (a)_____to_____

(b) At 5 p.m., what fraction of the tank was filled with water?

Ans : (b)_____

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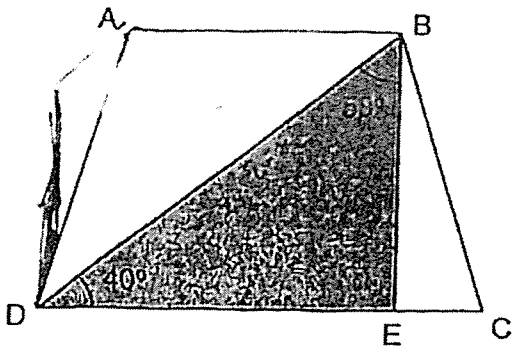
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ACSJ

30 In the figure below, ABCD is a trapezium and AD = BC.



Each of the statements is either true, false or not possible to tell from the information given. For each statement, put a tick (√) to indicate your answer.

Statement	True	False	Not possible to tell
AB // CD			
∠ADE + ∠CBE = 90°			
The shaded area is greater than the unshaded area.			

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End of Booklet B

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Anglo-Chinese School (Junior)

PRELIMINARY EXAMINATION (2023)

PRIMARY 6
MATHEMATICS
PAPER 2

18 August 2023

Time : 1 hour 30 minutes

Name: _____ ( ) Class: 6.( )

Parent's Signature: _____

INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.
4. Use a dark blue or black ballpoint pen to write your answers in the space provided for each question.
5. Do not use correction fluid/tape or highlighter.
6. The use of an approved calculator is allowed.

Paper	Booklet	Possible Marks	Marks Obtained
1	A	20	
	B	25	
2		55	
Total		100	

This question paper consists of 19 printed pages and 1 blank page.

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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)

1 A bag of sweets was shared equally among a group of 36 students. 12 of them gave up all of their sweets to the rest of the students. As a result, the rest of the students received 5 more sweets each. How many sweets were there in the bag at first?

Ans : _____

2 A box contained some red and yellow balls. At first, the number of red balls to the number of yellow balls is 1 : 3. After $\frac{1}{4}$ of the red balls and $\frac{3}{8}$ of the yellow balls were taken out, there were 63 balls left in the box. How many yellow balls were there in the box at first?

Ans : _____

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3 The table shows the amount of money Jamie spent at a restaurant for the first three weeks.

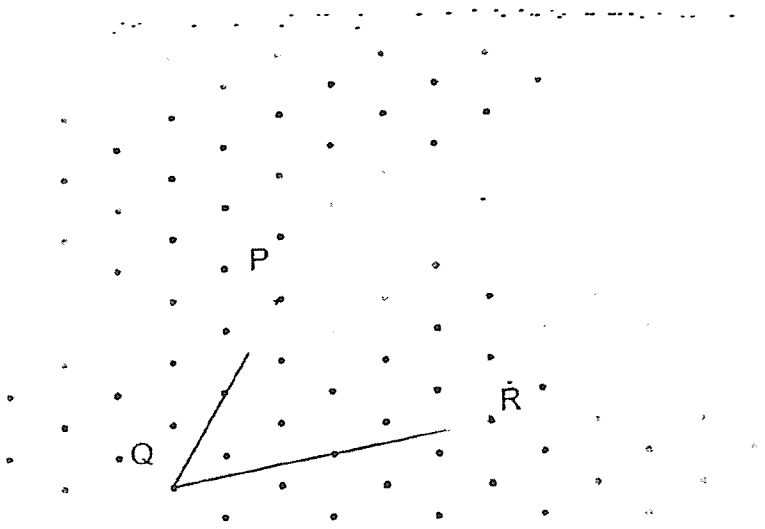
Week	Amount spent ($)
1	36
2	39
3	37
4	?

Jamie will get a free meal if the average amount of money he spent for three of the four weeks is $40 or more. What is the smallest amount Jamie must spend in Week 4 to receive the free meal?

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4 In the grid below, 2 sides of a trapezium PQRS have been drawn. Complete the drawing of trapezium PQRS where PQ is parallel to RS and RS is twice as long as PQ. Label dot S.

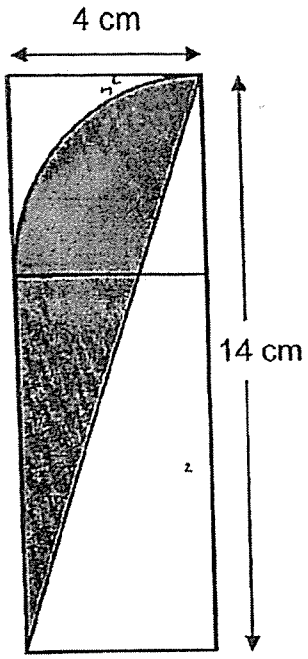


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5 The figure is made up of a rectangle, a square and a quadrant. Find the area of the shaded part. (Take $\pi = 3.14$)



Ans : _____ cm^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)

6 Mrs Lee wrote the word RESILIENCE repeatedly as shown. Study the letters below carefully and answer the questions that follow.

R E S I L I E N C E R E S I L I E N C E R E S I L I E N C E ...
3 4 5 6 9

(a) How many 'E's are there in the 1st 100 letters?

Ans : (a)_____[1]

(b) How many letters are there altogether up to the 101st 'E'?

Ans : (b)_____[2]

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7 The table shows the number of seashells collected by 3 boys.

Name	Number of seashells
Jim	17
Ken	x
Leo	6x - 5

(a) Express the total number of seashells the 3 boys have in terms of x in the simplest form.

Ans : (a)_____[1]

(b) If the average number of seashells the 3 boys collected is 39, what is the value of x?

Ans : (b)_____[2]

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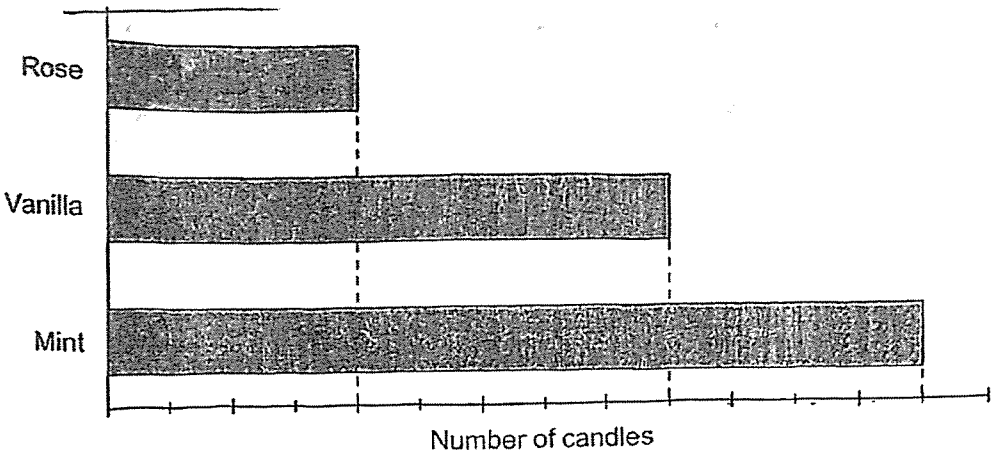
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8 Alisha bought candles of 3 different fragrances. The bar graph shows the number of each type of candle that she bought. The number of candles she bought is not shown on the scale.



(a) What percentage of the candles Alisha bought were mint candles?

Ans : (a)_____[1]

(b) The price of each rose candle is $12.80. Alisha spent $153.60 on rose candles. How many vanilla candles did she buy?

Ans : (b)_____[2]

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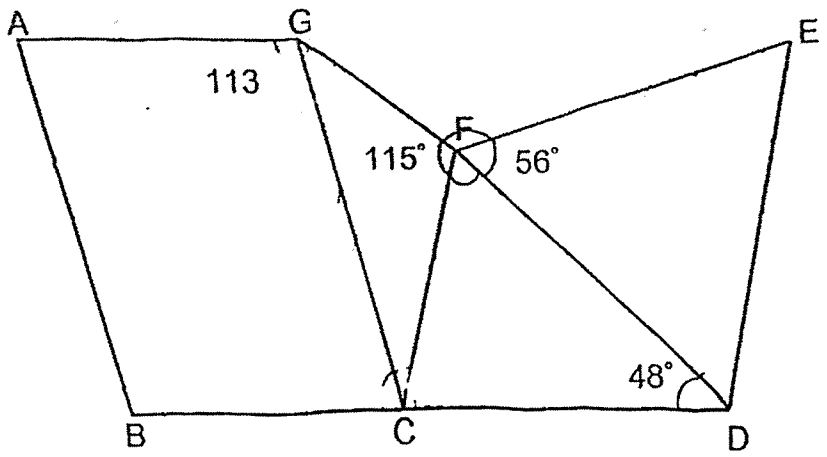
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9 In the figure below, ABCG is a parallelogram and CDEF is a trapezium. EF = ED and BCD is a straight line. AGC = 113°, ∠GFC = 115°, ∠EFD = 56° and CDF = 48°



(a) Find ∠FCD.

Ans : (a)_____[1]

(b) Find ∠CGF.

Ans : (b)_____[2]

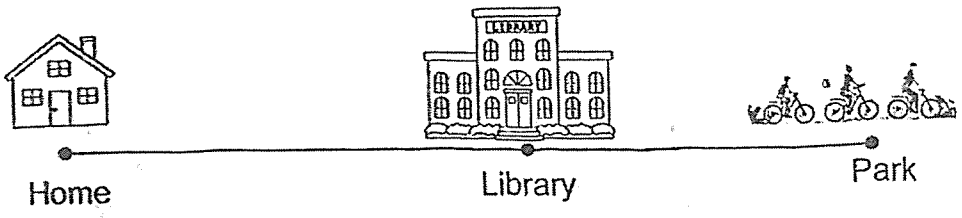
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10 Munirah cycled from her home to a park. On her way, she had to cycle past a library.



She cycled at an average speed of 15 km/h for $\frac{1}{2}$ h from her home to the library. She then cycled the remaining $\frac{2}{5}$ of the journey for 45 minutes.

(a) What was the distance she cycled from her home to the library?

Ans : (a)_____[1]

(b) What was her average speed for the whole journey?

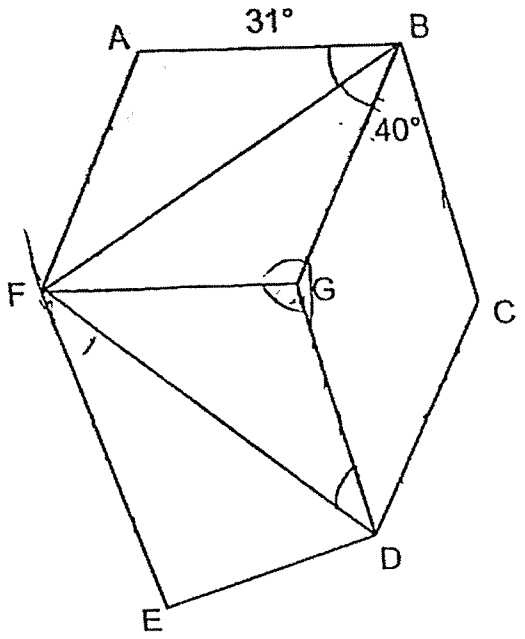
Ans : (b)_____[2]

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11 In the figure below, ABGF and BCDG are rhombuses. $\angle ABF = 31°$, $\angle CBG = 40°$ and EF is parallel to DG.



(a) Find $\angle FGD$.

Ans : (a)_____[3]

(b) Find $\angle DFE$.

Ans : (b)_____[2]

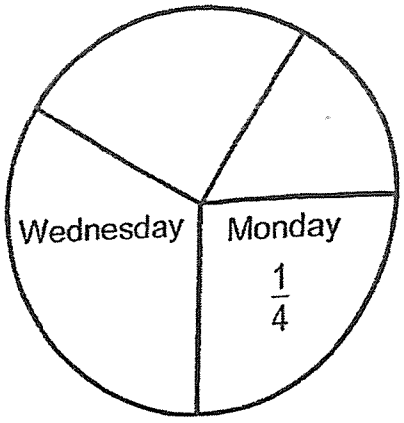
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12 The pie chart below shows the amount of pasta sold from Monday to Thursday.



(a) The ratio of the amount of pasta sold on Wednesday to the amount of pasta sold to Monday was 3 : 2. What fraction of the amount of pasta was sold on Wednesday?

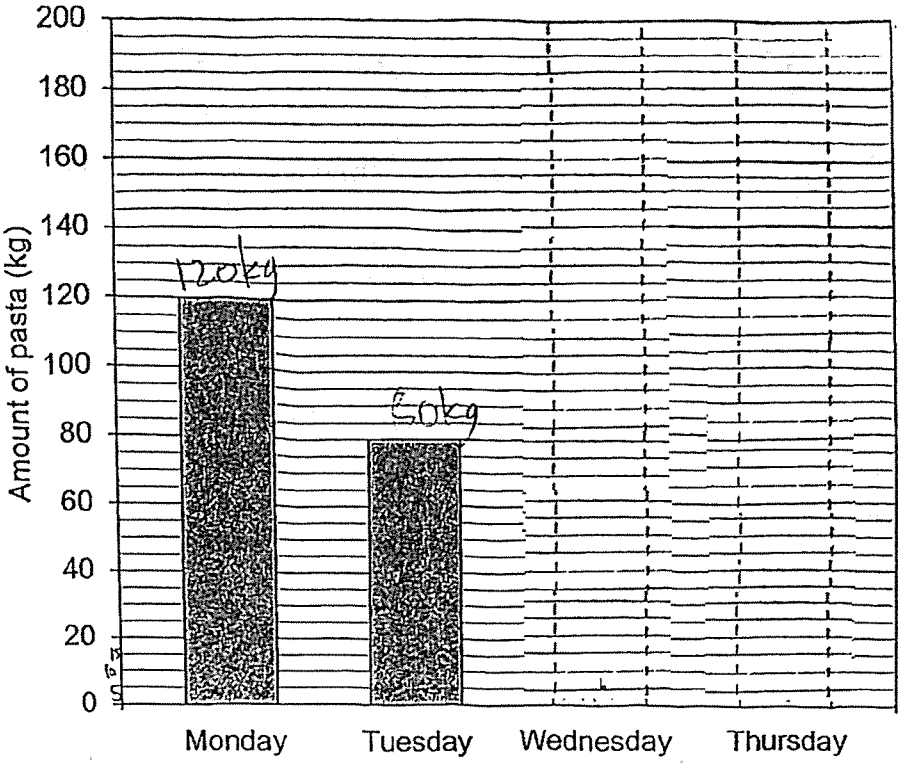
Ans : (a)_____[1]

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The amount of pasta sold is also represented by the bar graph below. The bars for the amounts of pasta sold on Wednesday and Thursday have not been drawn.

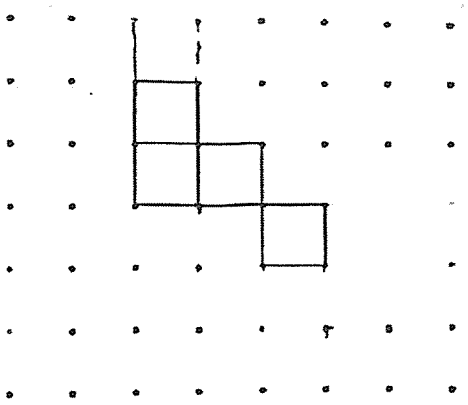


(b) Draw the bars for the amount of pasta sold on Wednesday and Thursday in the graph above. [3]

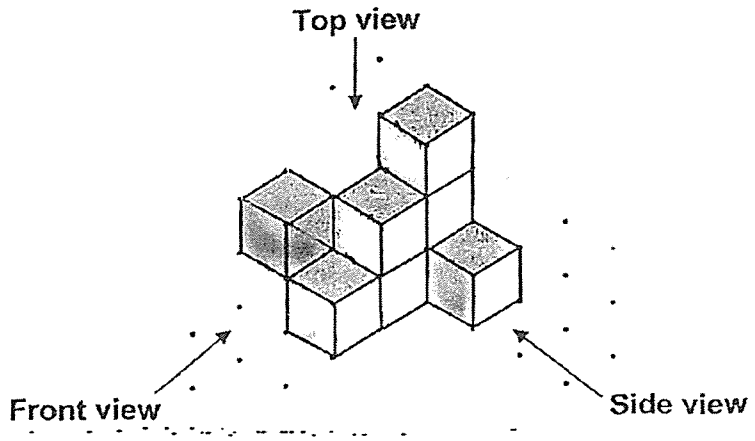
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13 Terry made a cube using cardboard.

(a) Draw 2 more squares in the grid below to complete the net of the cube which Terry made. [1]



Terry then made 9 identical cardboard cubes to form solid P as shown below.



(b) Draw the front view of solid P on the dot grid below. [1]

Front view



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(c) All the cubes were rearranged and glued together to form solid Q such that when the whole solid Q is painted blue including the base, the number of unpainted faces would be the least possible. How many faces were painted blue?

Ans : (c)_____[2]

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14 Mr. Kassim had some mangoes and apples for sale. He sold 144 mangoes. 40% of the fruits he sold were apples.

(a) How many fruits did Mr Kassim sell altogether?

Ans : (a)_____[1]

(b) He sold 30% of his fruits. 70% of the fruits left unsold were mangoes. How many apples did Mr. Kassim have at first?

Ans : (b)_____[3]

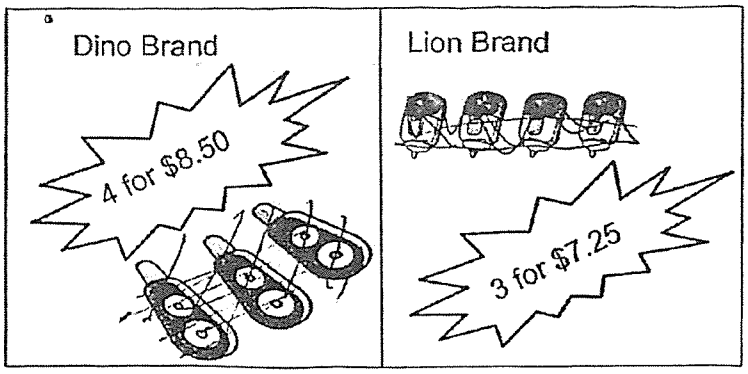
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15 Raju, Sam and Tristan had a total of \$435. Raju spent $\frac{4}{5}$ of his money, Sam spent $\frac{2}{3}$ and Tristan spent $\frac{3}{4}$ of his money. In the end, Raju had \$55 more than Sam and Tristan had \$10 more than Sam. How much money did Tristan have at first?

Ans : _____ [4]

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16 Matt bought some Dino Brand and Lion Brand correction tapes at the prices shown below.



$\frac{1}{3}$ of the correction tapes Matt bought was Lion Brand correction tapes. He spent $198 more on Dino Brand correction tapes. How much did he spend on the correction tapes?

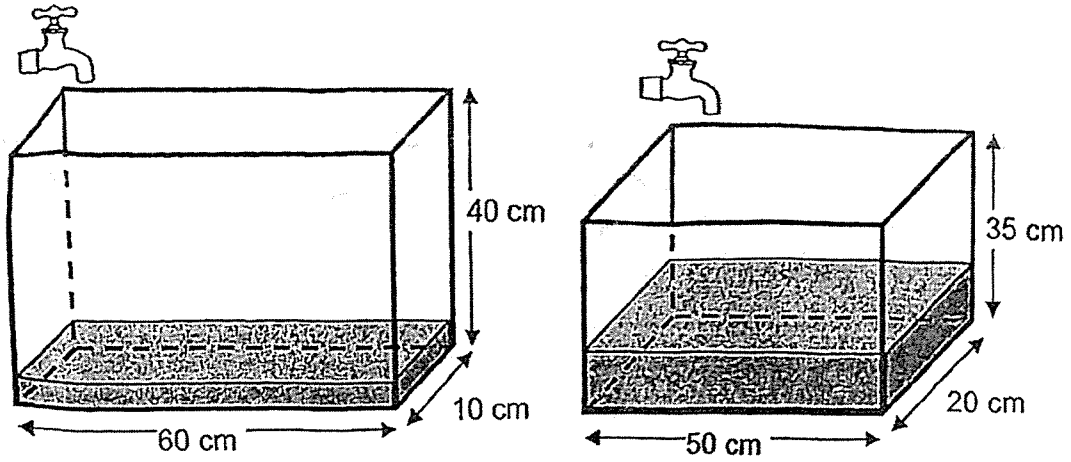
Ans : _____ [4]

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17 Two rectangular tanks are shown below.



At the beginning, Tank A was $\frac{1}{10}$ filled with water and Tank B was $\frac{2}{5}$ filled with water. Both tanks had taps turned on at the same time and water flowed from both taps at the same rate of 1.2 litres per minute.

(a) How long will it take for the height of the water to be the same in both tanks?

Ans : (a)_____ [3]

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(b) At what height will this happen?

Ans : (b)_____[2]

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End of Paper 2

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SCHOOL : ACS PRIMARY SCHOOL

LEVEL : PRIMARY 6

SUBJECT : MATHEMATICS

TERM : 2023 PRELIMINARY EXAMINATION

Booklet A

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
2	4	3	1	4	2	2	3	3	2
Q11	Q12	Q13	Q14	Q15					
1	2	3	3	1					

Booklet B

Q16	137
Q17	9009.099
Q18	2.75
Q19	13
Q20	$\frac{1}{2}$
Q21	2.15, $2\frac{1}{5}$, $\frac{21}{5}$
Q22	POQ = 180 - 138 = 42 ROS = 180 - 130 = 50 QOR = 180 - 42 - 50 = 88°
Q23	a) Southeast b) F
Q24	(1.21 – 0.67) / 20 = 0.027kg
Q25	90 – 74 = 16 x 2 = 32 (90 – 32) / 2 = 29
Q26	a) 2y + 15 – 4 – 4 = 2y + 7 b) 2(3) + 7 = 13cm
Q27	a) A and C, 4.20 + 3.70 = 7.90

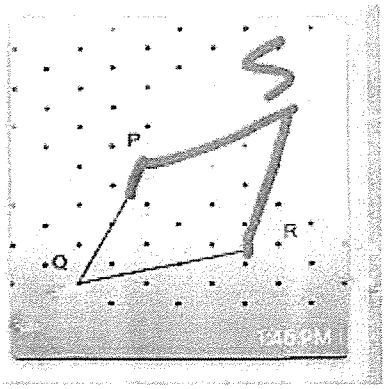
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	(A &C) 20 – 9.5 = 10.5 ©
Q28)	60 x 0.9 = 54 40 x 0.8 = 32 54 + 32 = 86
Q29)	2-3pm 22/30 = 73.3%
Q30)	True False false

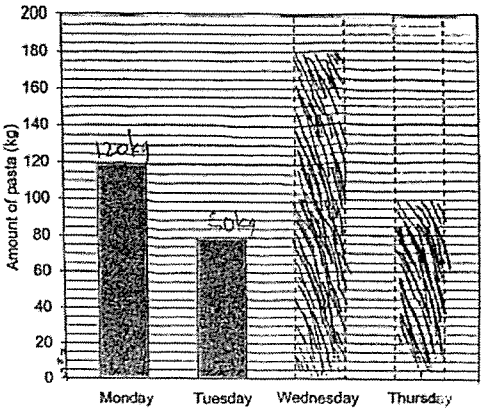
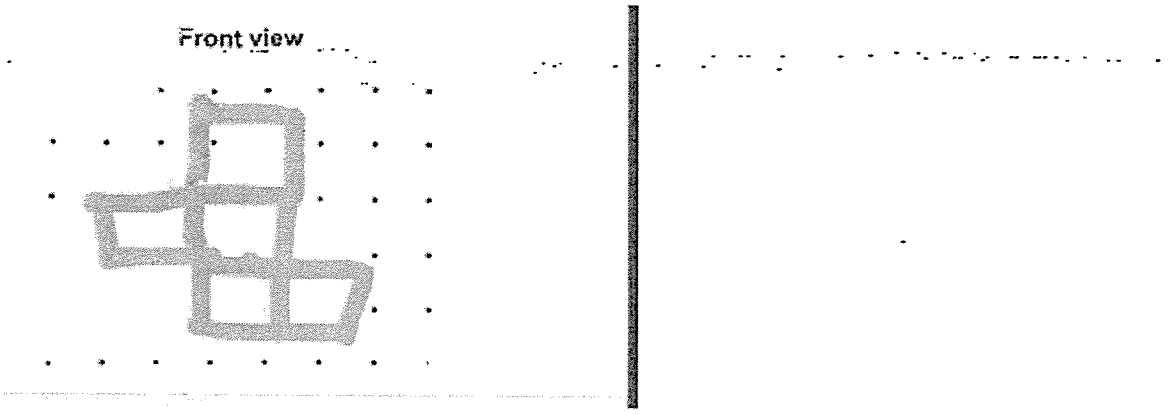
Paper 2

Q1)	(36 – 12) x 5 = 120 120 / 12 = 10 36 x 10 = 360
Q2)	R : Y 1 : 3 6 : 15 21u = 63 1u = 3 8 : 24 24u = 72
Q3)	3 x 40 = 120 120 – 39 – 37 = 44

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Q4)	
Q5)	½ x 14 x 14 = 98 ½ x 4 x 4 = 8 ¼ x 22/7 x 4 x 4 = 12.57
Q6)	a)3/10 (3 E for 10 letters) 3 x 10 = 30 b) 101 E = 10 x 43 + 7 = 437 letters
Q7)	a)7x + 12 b)7x + 12 = 39 x 3 X = 15
Q8)	a)3/6 = 50% b)153.60 / 12.8 x 2 = 24
Q9)	a)180 – 48 – 56 = 76 b)180 – 113 = 67 180 – 67 – 67 = 37 180 – 115 – 37 = 28
Q10)	a)15 x ½ = 7.5 3u = 7.5 2u = 5 b)7.5 + 5 = 12.5 12.5/ (½ + ¾) = 10km/h

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Q11)	a)180 – 62 = 118 b)(180 – 102) / 2 = 39 180 – 102 – 39 = 39
Q12)	a) ¼ = 2/8 2u = 2/8 3u = 3/8 2u = 120 3u = 180 b) 
Q13)	

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Q14)	a)60% = 144 100% = 240 b)30% = 240 70% = 560 100% = 560 30% = 168 168 + 96 = 264
Q15)	R = 5u + 5 x 55 S = 3u T = 4u + 4 x 10 (435 – 40 – 275) / 12u = 10 1u = 10 T = 10 x 4 + 40 = 80
Q16)	4 x 3 set = 12 3 x 2 set = 6 8.5 x 3 = 25.5 7.25 x 2 = 14.5 25.5 – 14.5 = 11 198 / 11 = 18 group (25.5 + 14.5) x 18 = $720
Q17)	40 x 1/10 = 4cm 35 x 2/5 = 14cm 14 – 4 = 10cm different 50 x 20 – 60 x 10 = 400 different in surface 400 x 10 / 1200 = 3 min 20 sec 1200 x 3 min 20sec /1000 + 14cm = 18cm

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