RED SWASTIKA SCHOOL

2024 PRELIMINARY ASSESSMENT

MATHEMATICS
PAPER 1

Name : _____ ( )

Class : Primary 6 / _____

Date : 16 August 2024

BOOKLET A

15 Questions
20 Marks
Duration of Paper 1 (Booklets A & B): 1 hour

Note:

1. **Do not open this Booklet until you are told to do so.**
2. **Read carefully the instructions given at the beginning of each part of the Booklet.**
3. **Do not waste time. If a question is difficult for you, go on to the next one.**
4. **Check your answers thoroughly and make sure you attempt every question.**
5. **In this booklet, you should have the following:**
   (a) Page 1 to Page 6
   (b) Questions 1 to 15
6. **You are not allowed to use a calculator.**

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 in the Optical Answer Sheet. (20 marks)

---

1 80 000 + 4000 + 300 + 8 = _____

(1) 84 380

(2) 84 308

(3) 84 038

(4) 80 438

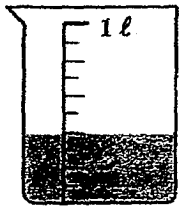
2 How much water is in the container shown?

(1) 200 ml

(2) 300 ml

(3) 400 ml

(4) 500 ml



3 Which of the following is equal to $4\frac{5}{6}$?

(1) $\frac{24}{6}$

(2) $\frac{26}{6}$

(3) $\frac{29}{6}$

(4) $\frac{45}{6}$

4 Ali folds 10 stars in 5 minutes.
At this rate, how many stars can Ali fold in 50 minutes?

(1) 25

(2) 50

(3) 100

(4) 500

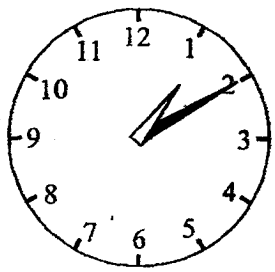
5 What is 15 minutes before the time shown on the clock?

(1) 12 55

(2) 13 25

(3) 13 50

(4) 14 20



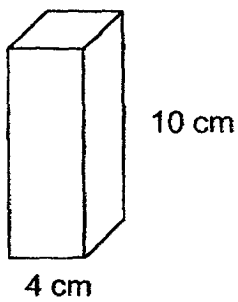
6 A solid cuboid of height 10 cm has a square base of side 4 cm.
What is its volume?

(1) 40 cm^3

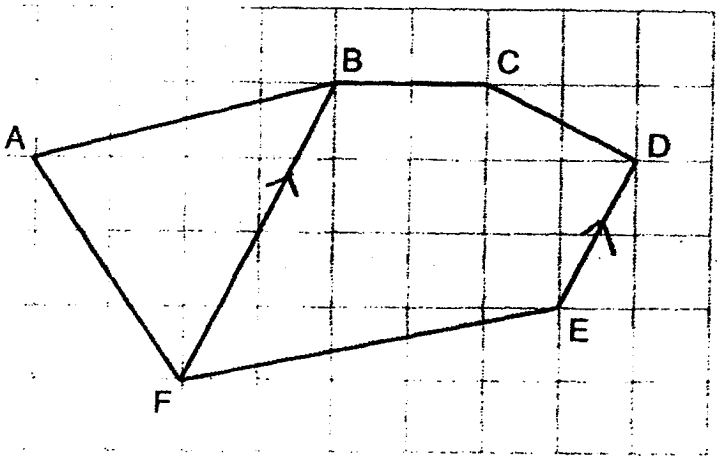
(2) 160 cm^3

(3) 240 cm^3

(4) 400 cm^3



7 Which line in the square grid is parallel to DE?



(1) BF

(2) EF

(3) CD

(4) AB

8 Arrange these distances from the longest to the shortest.

1.15 km 1 km 105 m $1\frac{1}{5}$ km

	Longest		Shortest
(1)	1 km 105 m	$1\frac{1}{5}$ km	1.15 km
(2)	1 km 105 m	1.15 km	$1\frac{1}{5}$ km
(3)	1.15 km	1 km 105 m	$1\frac{1}{5}$ km
(4)	$1\frac{1}{5}$ km	1.15 km	1 km 105 m

9 The table shows the number of red and blue balloons 4 classes bought.

Class	Number of balloons		
	Red	Blue	Total
6A	12	17	29
6B	18	10	28
6C	14	13	27
6D	11	19	30

Which class bought the most number of balloons?

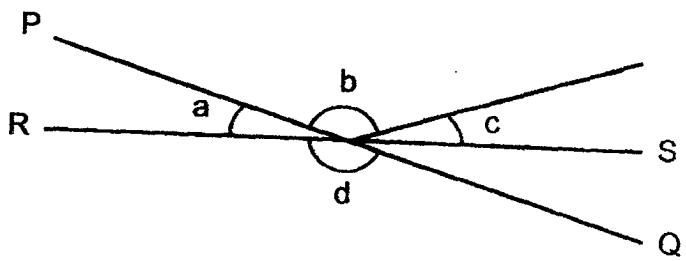
(1) 6A

(2) 6B

(3) 6C

(4) 6D

10 PQ and RS are straight lines.



Which of the following is true?

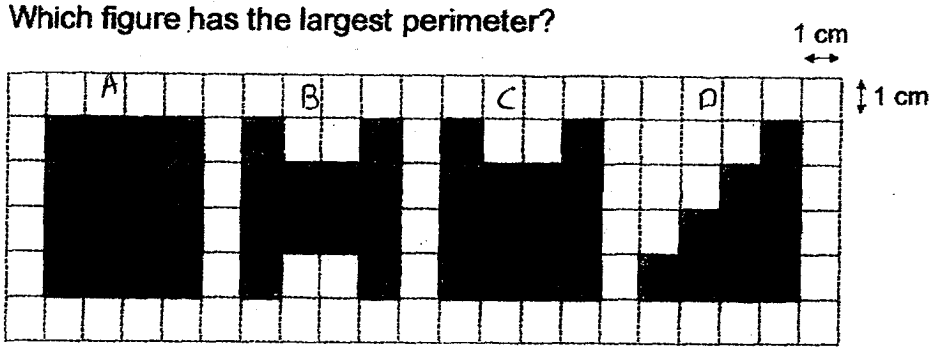
(1) $\angle a = \angle c$

(2) $\angle b = \angle d$

(3) $\angle b + \angle c = 180°$

(4) $\angle a + \angle d = 180°$

11 Which figure has the largest perimeter?



(1) A

(2) B

(3) C

(4) D

12 Jane received $120 as her bursary award.
She gave $30 to her father.
What percentage of the bursary award money did Jane have left?

(1) 25%

(2) 30%

(3) 75%

(4) 90%

13 A box contains red, blue and yellow beads. $\frac{1}{3}$ of the beads are red.

There were twice as many blue beads as yellow beads.
What fraction of the beads in the box are blue?

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

(2) $\frac{2}{9}$

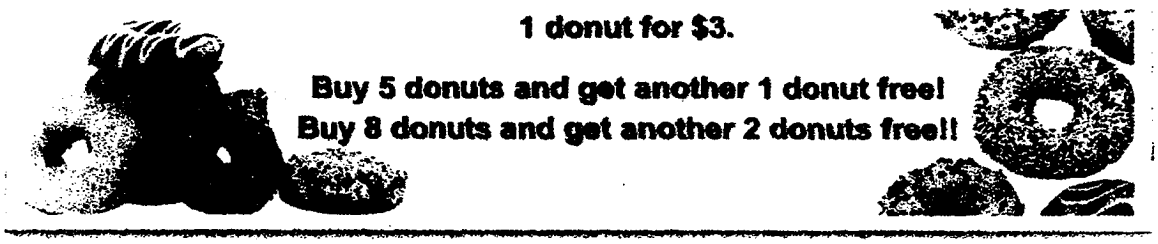
(3) $\frac{2}{3}$

(4) $\frac{1}{6}$

14 Tim is to multiply a decimal by 100.
In a rush, he divided it by 10 and obtained 8.94.
What should be the correct answer?

(1) 0.894
(2) 89.4
(3) 894
(4) 8940

15 A bakery had the promotion below.



Pete left the bakery with 127 donuts using the given promotion..
What was the least amount of money he had to pay for 127 donuts?

(1) $303
(2) $306
(3) $375
(4) $381

慈学校
恭宽信敏
RED SWASTIKA SCHOOL

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2024 PRELIMINARY ASSESSMENT

MATHEMATICS
PAPER 1

Name : _____ ( )

Class : Primary 6 / _____

Date : 16 August 2024

BOOKLET B

15 Questions
25 Marks

In this booklet, you should have the following:
(a) Page 7 to Page 13
(b) Questions 16 to 30

MARKS

	OBTAINED	POSSIBLE
BOOKLET A		20
BOOKLET B		25
TOTAL		45

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

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16 Find the value of 10.21 – 7.89

Ans: _____

---

17 Find the largest multiple of 8 that is smaller than 60.

Ans: _____

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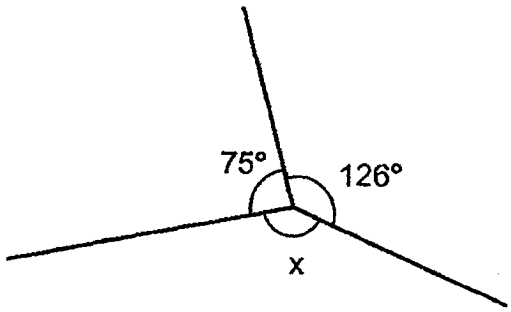
18 Find the value of $\frac{2}{3} \times \frac{1}{6}$

Ans: _____

---

19 Find $\angle x$ in the figure below.



Ans: _____ °

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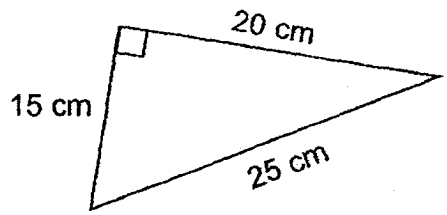
20 The figure shows a right-angled triangle.
Find the area of the triangle.

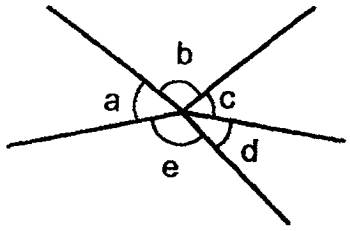


Ans: _____ cm^2

Questions **21** to **30** carry 2 marks each. Show your working clearly and write your answers in the space provided. For questions which require units, give your answers in the units stated.

(20 marks)

21



(a) Name the smallest angle.

Ans: a) ∠_____

(b) Name the two angles that are greater than 90°.

Ans: b) ∠_____ and ∠_____

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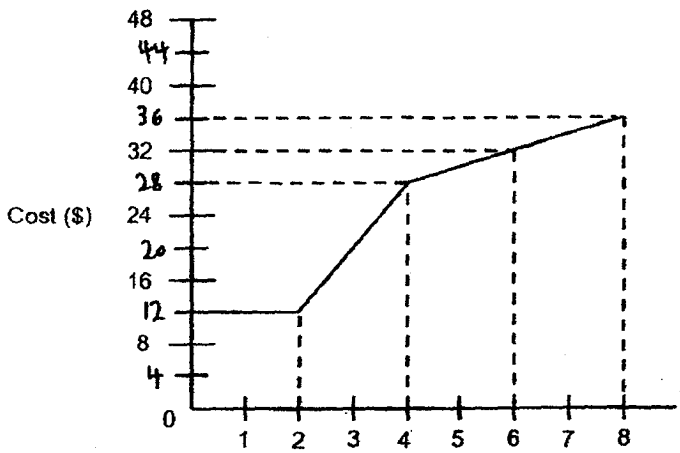
22 The line graph below shows the cost for the amount of overseas mobile data used.



(a) Ben used 1 unit of overseas mobile data during his trip. How much did Ben pay?

Ans: a) $_____

(b) Ali paid $28. How many unit(s) of overseas mobile data did he use?

Ans: b) _____

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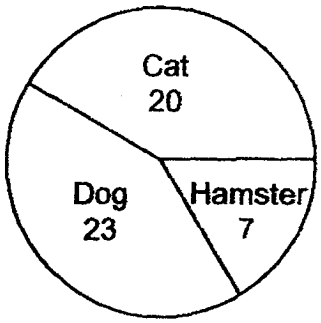
23 A group of 50 students were asked to choose their favourite pet animal from Cat, Dog and Hamster. The pie chart represented the students' choices..



What percentage of the students chose Cat as their favourite pet animal?

Ans: _____%

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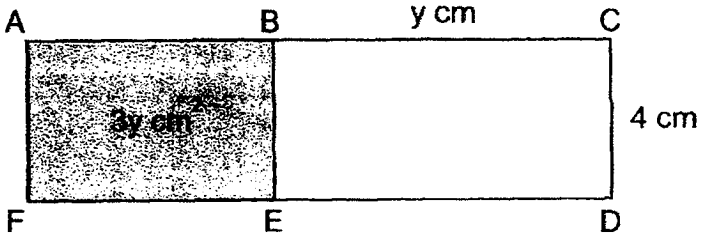
24 The figure is made up of two rectangles ABEF and BCDE. BC = y cm, CD = 4 cm and the area of ABEF is 3y cm^2. The total area of the figure is 42 cm^2.



(a) Find the perimeter of BCDE in terms of y.

Ans: _____ cm

(b) Find the value of y.

Ans: _____

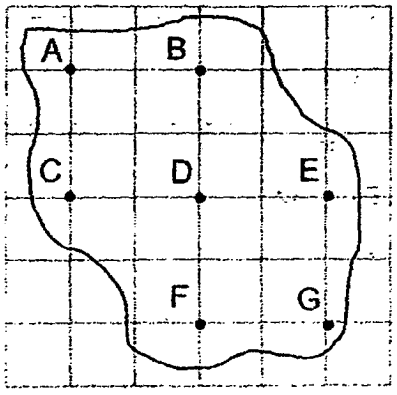
---

25 In a shop, ribbon was sold at $3 per metre. Amy brought $30 to the shop. How much more money does Amy need to buy 10.5 m of the ribbon?

Ans: $_____

---

26 Seven landmarks on a map of an island are shown in the square grid below.



(a) In which direction is B from E?

Ans: a) _____

(b) Daryl is at one of the landmarks. He is facing D. When he turns 45° clockwise, he faces B. Which landmark is Daryl at?

Ans: b) _____

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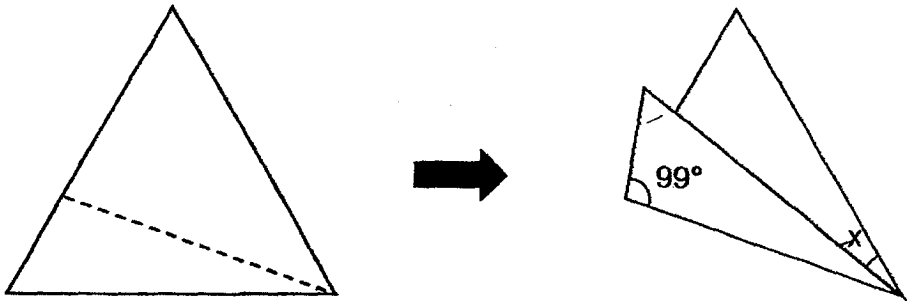
27 A piece of paper in a shape of an equilateral triangle is folded along the dotted line as shown below.



Find $\angle x$.

Ans: _____ °

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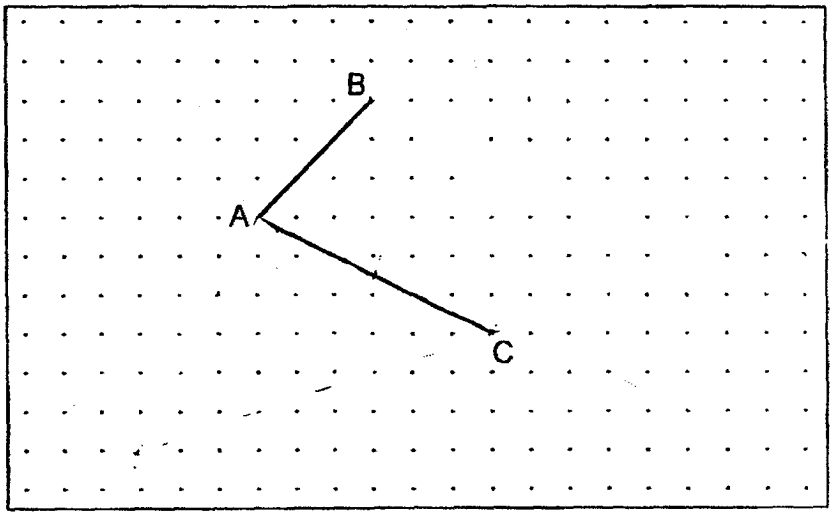
28 Two lines, AB and AC, are drawn inside a box.



(a) ACX is a right-angled triangle such that AC = AX. Draw ACX in the grid above.

(b) ABYC is a trapezium such that AC is parallel to BY. Draw ABYC in the grid above.

---

29 Jane had $50 more than Ray at first. After Jane gave some of her money to Ray, Jane had $12 more than Ray. How much money did Jane give to Ray?

Ans: $_____

---

30 Mrs Li bought a piece of ribbon. She cut it equally into 10 pieces and each piece is $\frac{3}{5}$ m long. Mrs Tan also bought the same length of ribbon. She cut it into equal pieces. Each piece is $\frac{5}{8}$ m long.

(a) How many pieces of the ribbon would Mrs Tan have at most?

Ans: a) _____

(b) What was the length of ribbon Mrs Tan would have left?

Ans: b) _____ m

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2024 PRELIMINARY ASSESSMENT

MATHEMATICS
PAPER 2

Name : _____ ( )

Class : Primary 6 / _____

Date : 16 August 2024

17 Questions
55 Marks
Duration of Paper 2: 1 hour 30 minutes

Note:
1. Do not open this Booklet until you are told to do so.
2. Read carefully the instructions given at the beginning of each part of the Booklet.
3. Do not waste time. If a question is difficult for you, go on to the next one.
4. Check your answers thoroughly and make sure you attempt every question.
5. In this paper, you should have the following:
   (a) Page 1 to Page 16
   (b) Questions 1 to 17
6. You are allowed to use a calculator.

MARKS

	OBTAINED	POSSIBLE
PAPER 1		45
PAPER 2		55
TOTAL		100

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 Esther paid $46.60 for 10 similar pens and 12 similar files.
The total price of a pen and a file was $4.

(a) What was the cost of 1 file?

Ans: a) $_____

(b) What was the total cost of 15 pens and 12 files?

Ans: b) $_____

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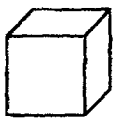
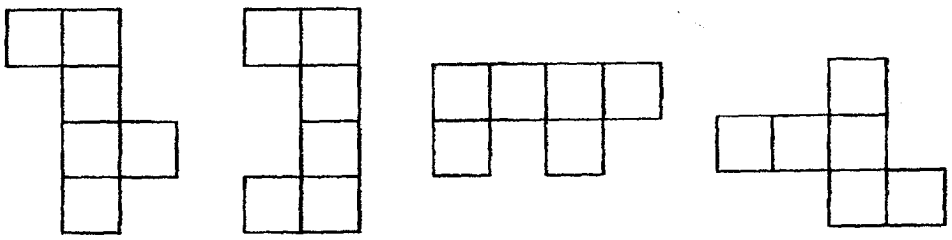
2 A cube is shown below.



Which of the following is/are net(s) of a cube?

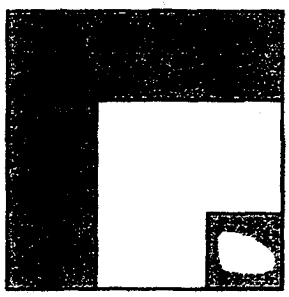


A B C D

Ans: _____

---

3 Chang Min drew three squares to form a figure. The ratio of the area of the squares were in the ratio of 2 : 7 : 15. She then shaded some parts of the figure as shown below such that the area of the unshaded part is 35 cm^2.



What was the total shaded area of the figure?

Ans: _____ cm^2

---

4 James and Ali jogged from the same starting point. Both went in the same direction and did not change their speeds throughout. At 07 00, James started jogging at 7 km/h. At 07 15, Ali started jogging at 12 km/h. How far apart were they at 07 45?

Ans: _____ km

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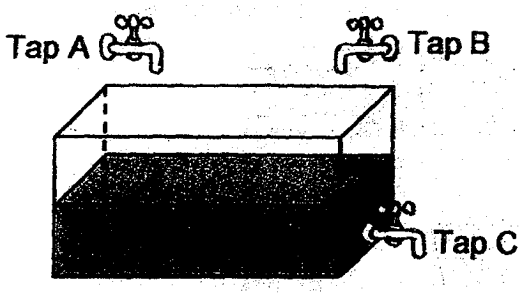
5 The figure shows a tank half-filled with water with 3 taps A, B and C.



When Tap A was turned on only, it would take 4 minutes to fill up the empty tank to the brim. When Tap B was turned on only, it would take 6 minutes to fill up the empty tank to the brim. When Tap C was turned on only, it would take 3 minutes to empty a full tank. Ali turned on all 3 taps at the same time. How long would it take to fill the half-filled tank to the brim?

Ans: _____ min

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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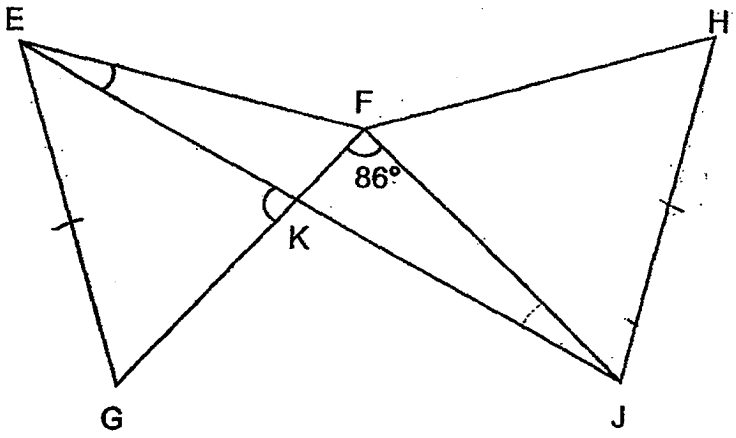
6 The figure below shows two identical equilateral triangles EFG and FHJ. EKJ is a straight line and $\angle KFJ = 86°$



(a) Find $\angle FEK$.

Ans: a) _____ [2]

(b) Find $\angle EKG$.

Ans: b) _____ [1]

---

7 Three students collected plastic bottles for recycling. Kim collected m bottles fewer than Siti. The table below has partly recorded the number of plastic bottles collected.

Student	Number of plastic bottles
Paul	$4 + m$
Siti	$2 + 3m$
Kim	?
Total	?

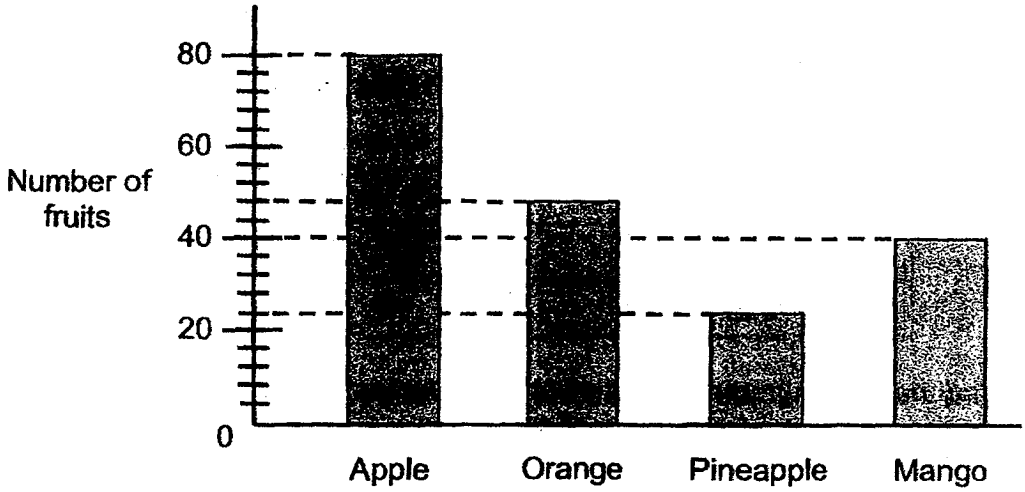
(a) Find the total number of plastic bottles collected by the three students. Express your answer in terms of m.

Ans: a) _____ [2]

(b) Given that $m = 12$, find the total number of plastic bottles collected by the three students.

Ans: b) _____ [1]

8 The bar graph shows the number of fruits sold by a shop.



The table shows the price of each fruit.

Type of fruit	Price per fruit
Apple	$0.55
Orange	$0.70
Pineapple	$2.20
Mango	$1.40

(a) What fraction of the fruits sold were oranges?
Express your answer in simplest form.

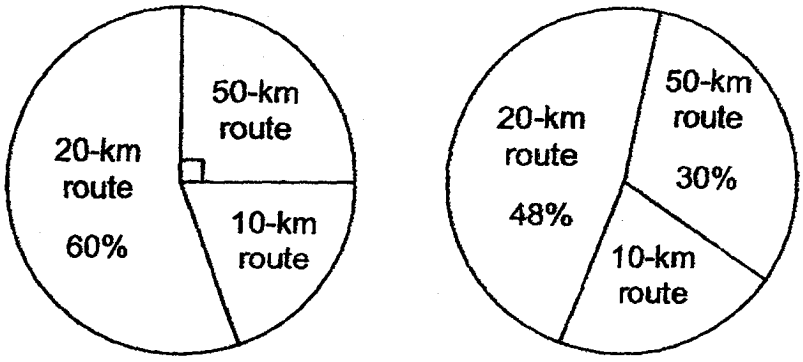
Ans: a) _____ [1]

(b) From the sale of which type of fruits did the shop collect the most amount of money? What was the amount of money?

Ans: b) Type: _____

Amount: _____ [2]

9 At a marathon, each participant completed either a 10-km route, 20-km route or 50-km route. The pie chart shows the number of participants for each route for men and women. There were 3 times as many men as women who took part in the marathon.



(a) What was the ratio of the number of men who completed the 50-km route to the number of women who completed the 50-km route? Give your answer in the simplest form.

Ans: a) _____ [1]

(b) The total number of participants is 160. Find the total distance travelled by all the men.

Ans: b) _____ [2]

(c) What was the average distance travelled by each man at the marathon?

Ans: c) _____ [1]

10 During a Math test, the average mark for a class of students was 81 marks. When four students with an average of 64 marks were excluded, the average marks for the remaining students in the class would become 83 marks.

(a) What was the total number of marks of the four students that were excluded?

Ans: a) _____ [1]

(b) Find the total number of students in the class.

Ans: b) _____ [2]

11 Sally had some gold and silver balloons for her birthday party. On Monday, she bought an additional of 210 gold balloons such that 30% of the total balloons she had were silver. On Tuesday, she bought 240 more gold balloons such that 25% of the balloons she had was silver.

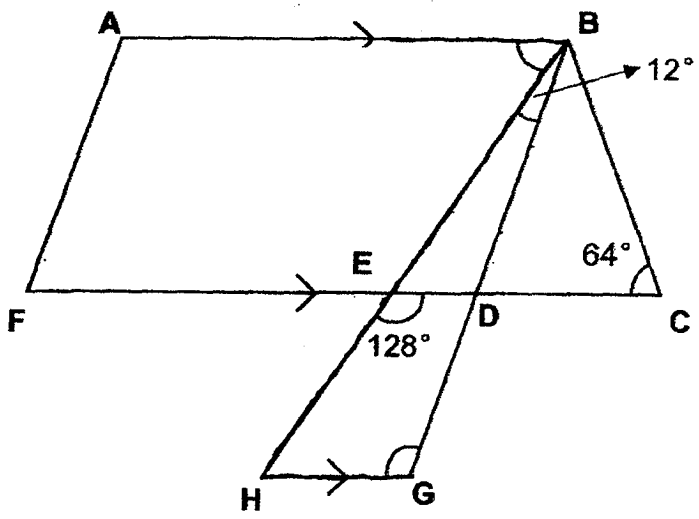
(a) How many silver balloons did Sally have?

Ans: a) _____ [2]

(b) What was the percentage increase of gold balloons after her two additional purchases of gold balloons on Monday and Tuesday? Leave your answer to 1 decimal place.

Ans: b) _____ [2]

12 The figure below is made up of a trapezium ABCF and a triangle BGH.
$\angle DEH = 128°$ and $\angle EBD = 12°$.



(a) Find $\angle ABE$.

Ans: a) _____ [1]

(b) Find $\angle BGH$.

Ans: b) _____ [2]

(c) Each statement below is either true, false or not possible to tell from the information given above. For each statement, put a tick (√) to indicate your answer. [2]

Statement	True	False	Not possible to tell
(i) BCD is an isosceles triangle.			
(ii) EBC is an isosceles triangle.			
(iii) ABDF is a parallelogram.			

13 Mr Lee bought some food for a party. $\frac{1}{4}$ of the food bought were sausages, $\frac{7}{20}$ of the food bought were nuggets and the rest were crabsticks. A piece of sausage cost 3 times as much as a piece of nugget and 4 times as much as a piece of crabstick.

(a) What was the ratio of the total amount Mr Lee spent on the sausage to the total amount spent on the nuggets to the total amount spent on the crabstick?

Ans: a) _____ [1]

(b) Mr Lee spent $63 more on buying the sausages than the crabsticks. How much did Mr Lee spend buying all the food?

Ans: b) _____ [2]

14 Figure 1 is made of a three-quarter circle and a square.
Figure 2 is made of 3 identical pieces of Figure 1 without overlapping.

Figure 1

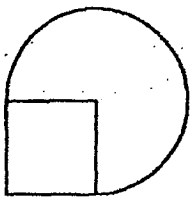
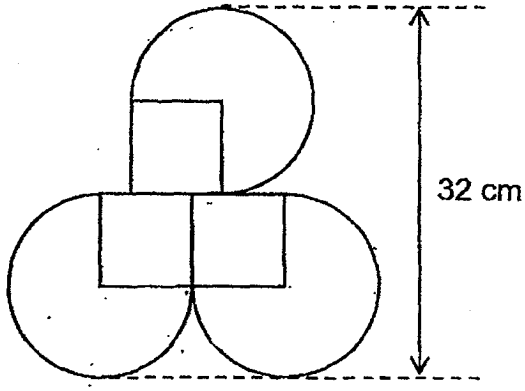


Figure 2



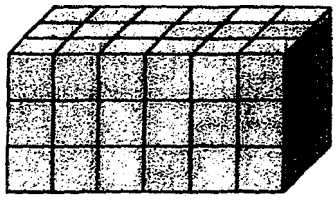
(a) Find the area of Figure 1. Take $\pi = 3.14$

Ans: a) _____ [2]

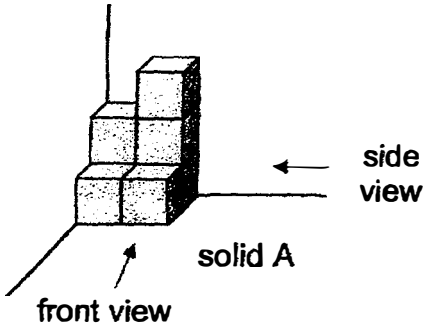
(b) Find the perimeter of Figure 2. Take $\pi = 3.14$

Ans: b) _____ [2]

15 Rajoo formed a block and solid A using 1-cm wooden cubes.
He then painted all the faces of both solids.



block



(a) At most, how many solids A can be formed using the 1-cm cubes from the block?

Ans: a) _____ [2]

(b) Find the smallest number of 1-cm cubes that should be added to solid A so that the new solid has the same front view and side view.

Ans: b) _____ [1]

(c) Rajoo sorted all 1-cm cubes from the block and solid A according to the number of faces painted.

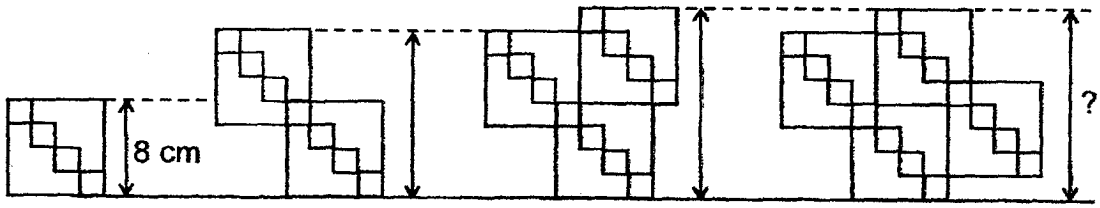
(i) Find the number of cube(s) with no faces painted.

Ans: c)(i) _____ [1]

(ii) Find the number of cube(s) with 3 faces painted.

Ans: c)(ii) _____ [1]

16 Aishah used identical squares to form figure 1. She used identical figures 1 to build other figures as shown.



(a) Aishah measured the distance between the top and the bottom of each figure. The height of Figure 1 is 8 cm. Find the distance between the top and the bottom of figure 4.

Ans: a) _____ [1]

(b) Find the distance between the top and the bottom of figure 10 as shown below.

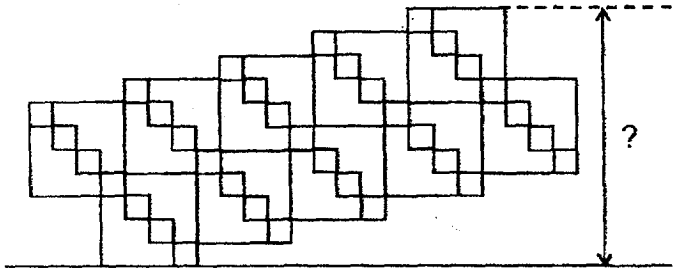


Figure 10

Ans: b) _____ [1]

16 (c) Using the diagrams on page 14 find the area of

(i) Figure 2.

Ans: c)(i) _____ [1]

(ii) Figure 25.

Ans: c)(ii) _____ [2]

17 Mrs Shirley had red and green apples for sale. $\frac{3}{4}$ of the apples sold were red. She sold 240 red apples. She also sold $\frac{2}{5}$ of ~~his~~ her apples. $\frac{3}{8}$ of the apples left unsold were green. How many red apples did Mrs Shirley have for sale at first?

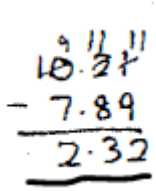
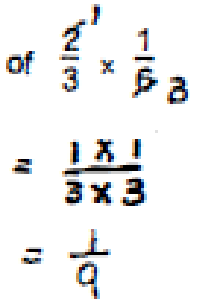
Ans: _____ [3]

SCHOOL : RED SWASTIKA
LEVEL : PRIMARY 6
SUBJECT : MATHEMATICS
TERM : 2024 PRELIMINARY EXAMINATION

Booklet A

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

Booklet B (Paper 1)

Q16		**Q17**	8, 16, 24, 32, 48, 56, 64 ✓ **56**
Q18		**Q19**	$\angle x$ = 360° - 126° - 75° = 159°
Q20	**Area of the triangle** $= \frac{1}{2} \times 20 \times 15$ $= 150\ cm^2$	**Q21**	**a) the name of the smallest angle = d** **b) ∠b, ∠c**
Q22	**a) Ben paid $12** **b) 4 units**	**Q23**	$\frac{cat}{total} \times 100\% = \frac{20}{20+23+7} \times 100$ $= \frac{20}{50} \times 100\%$ **= 40 %**

Q24

a)
y + y + 4 + 4
= 2y + 8 cm

b)
area=3y + (4 x y)
= 3y + 4y
= 7y

7y = 42
y = 42÷7
y = 6

Q25

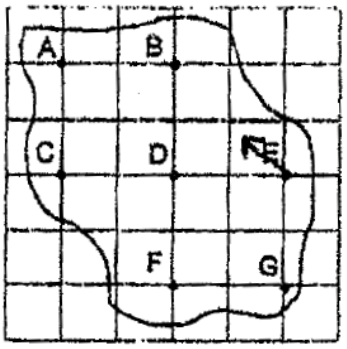
1m → $3

10.5m → $3 × 10.5
= $31.50

more needed → $31.50 - $30
= $1.50

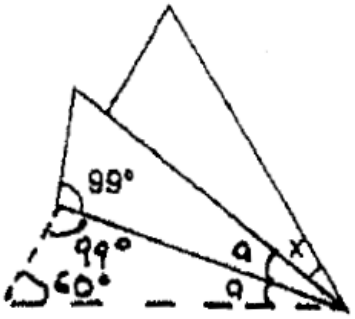
Q26

a) North-west



b) E

Q27

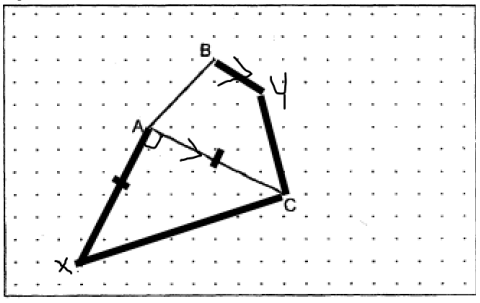


∠a = 180° - 99° - 60° = 21°

∠x = 60° - 21° - 21° = 18°

Q28

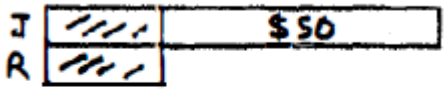
a)



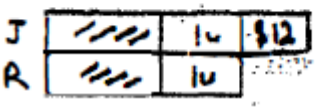
b)
Not a parallelogram

Q29

Before



After



2u = $50-$12 = $38
1u = $38 ÷ 2 = $19

Q30

a)

Ribbon → $10 \times \frac{3}{5}$
= 6m

No. of pieces → $6 \div \frac{5}{8}$
$= 6 \times \frac{8}{5}$
$= \frac{48}{5}$
$= 9\frac{3}{5} \approx 9$

b)

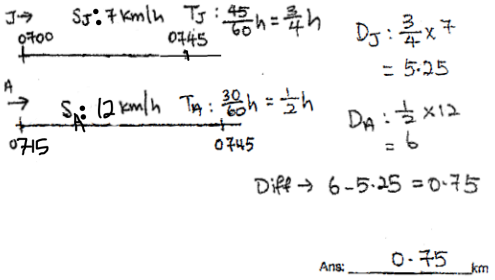
Left = $\frac{3}{5}$ of a piece
$= \frac{3}{5} \times \frac{5}{8}$
$= \frac{3}{8}$ m

Paper 2

<table>
<tr>
<td>Q1</td>
<td>
a)
1P + 1F →$4
So, 10P + 10F → $40
10P + 12F → $46.60
2F → $46.60 - $40
= $6.60
1F → $6.60 ÷2
= $3.30
b)
1P + 1F →$4
1P → $4 - $3.30 = $0.70
3P → $0.70 x 3 = $2.10

1P + 1F →$4
12P + 12F → $4 x12 = $48
15P + 12F → $48 + $2.10
= $50.10
</td>
<td>Q2</td>
<td>A, D</td>
</tr>
<tr>
<td>Q3</td>
<td>


S : M : L
2 : 7: 15

5u = 35
1 u = 35 ÷5 = 7
10u = 7 x 10 = 70
</td>
<td>Q4</td>
<td>


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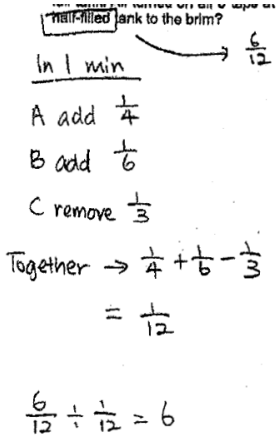
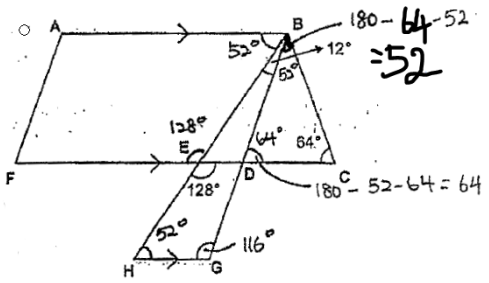
<tr>
<td>Q5</td>
<td>


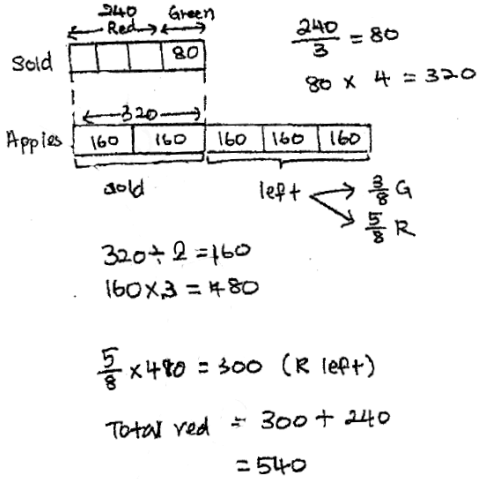
</td>
<td>Q6</td>
<td>
a)
$\frac{180-60-86}{2} = 17°$

b)
∠EFG = ∠GEF = ∠EGF = 60°
∠EKF = 180° - 17° - 60° = 103°
∠EKG= 180° - 103° = 77°
</td>
</tr>
<tr>
<td>Q7</td>
<td>
a)
Kim → 2+ 3m-m = 2 +2m
4 + m + 2 + 3m + 2 + 2m
= 6m + 8

b)
6 x 12 + 8 = 72 + 8 =80
</td>
<td>Q8</td>
<td>
a) 80 + 48 + 24 + 40 = 192
$\frac{48}{192} = \frac{1}{4}$

b)
A → $0,55 x 80 = $44
O → $0.7 x 48 = $33.6
P → $2.2 x 24 = $52.8
</td>
</tr>
</table>

			M → $1.4 x 40 = $56 **Type = Mango** **Amount = $56**
Q9	$M_{50} : W_{50}$ 75 : 30 5 : 2 **a)** 400u = 160 $M_{10}: \frac{160}{400} \times 45 = 18$ $N_{20}: \frac{160}{400} \times 180 = 72$ $M_{50}: \frac{160}{400} \times 75 = 30$ **b)** **Total distance** **= (18 x 10)+(72 x 20) + (30 x 50)** **= 3120** **c)** No. of men → $\frac{160}{400} \times 300 = 126$ Ave dist → $\frac{3120}{120} = 26$	**Q10**	**a) 64 x 4 = 256** **b)** **<u>Method 1</u>** 81 x 4 = 324 324 − 256 = 68 (for redistribution) 83 − 81 = 2 68 ÷ 2 = 34 34 + 4 = 38 **<u>Method 2</u>** **Guess and check** **Guess: 38 students at first** **Total marks → 38 x 81 = 3078** **3078 - 256 = 2822** **2822 ÷ 34 = 83**
Q11	**a)** 90u 70u G 210 240 S 30u 20u = 240 1u = 240 ÷ 20 = 12 30u = 12 x 30 = 360 **b)** **No of G at first = 840 -210 = 630** **Total added = 210 +240 = 450** $\frac{450}{630} \times 100 \approx 71.40\%$	**Q12**	 **a) Ans: 52°** **b) Ans: 116°** **c)** **(i) true** **(ii) true** **(iii) not possible to tell**
Q13	**a)** **<u>Quantity</u>** **<u>Unit value</u>** **S:N:C** **1S :1N** **1S :1C** **5 :7 :8** **3: 1** **4:1** **12: 4** **12:3**	**Q14**	**a)** **4r = 32, r = 8** **d= 8x2 = 16**

	Total value **S: N: C → T** **(5x12): (7x 4): (8 x3)** **60: 28: 24 → 112** **Or 15: 7: 6** **b)** **60u - 24 y = 36 u** **36u = 63** **1u = 63 ÷ 36 = 1.75** **112u = 1.75 x 112 = $196**		**(8 x 8) +** $(\frac{3}{4} \times 3.14 \times 8 \times 8)$ **= 64 + 150.72** **= 214.72** cm^2 **b)** $(3 \times \frac{3}{4} \times 3.14 \times 16) + 8 + 8$ **= 113.04 + 16** **= 129.04cm**
Q15	**a) 6 x 3 x3 = 54** **54 ÷ 7 = 7.7** **Ans: 7** **b) ans: 1**  **c)** **(i) 4** **(ii) (2 x 4) + 3 = 8 +3 = 11**	**Q16**	**a)** 4u = 8 1u = 8 ÷ 4 = 2 8u = 8 x 2 = 16 cm **b)** 11u = 2 x 11 = 22cm **c)** 8 x 8 x 2 − 2 x 2 = 128 − 4 = 124cm² **d)** 124 x 12 + 64 = 1488 + 64 = 1552cm²
Q17	 240 ÷ 3 = 80 80 x 4 = 320 320 ÷ 2 = 160 160 x 3 = 480 5/8 x 480 = 300 (R left) Total red = 300 + 240 = 540		