



## 2024 PRIMARY 6 PRELIMINARY EXAMINATION

Name: \_\_\_\_\_ ( ) Date: 19 August 2024

Class: Primary 6 ( )

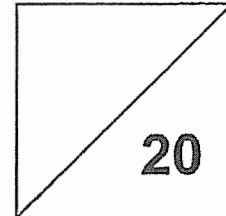
Time: 8.00 a.m. – 9.00 a.m.

Parent's Signature: \_\_\_\_\_ Marks: \_\_\_\_\_ / **100**

# MATHEMATICS

## PAPER 1

### (BOOKLET A)



### INSTRUCTIONS TO CANDIDATES

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

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)

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1. Round 38 749 to the nearest hundred.

- (1) 38 700
- (2) 38 750
- (3) 38 800
- (4) 38 850

2. Express  $8\frac{3}{50}$  as a decimal.

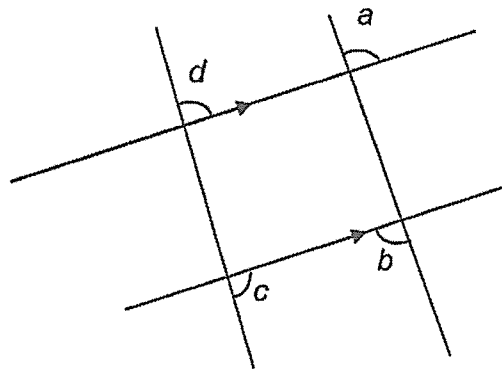
- (1) 8.03
- (2) 8.06
- (3) 8.30
- (4) 8.60

3. In a class of 33 students, 19 are girls. What is the ratio of the number of boys to the number of girls?

- (1) 14 : 19
- (2) 14 : 33
- (3) 19 : 14
- (4) 19 : 33

4. A concert started at 15 40 and ended at 17 25.  
What is the duration of the concert?
- (1) 185 min
  - (2) 165 min
  - (3) 145 min
  - (4) 105 min

5. Four lines intersect as shown below.



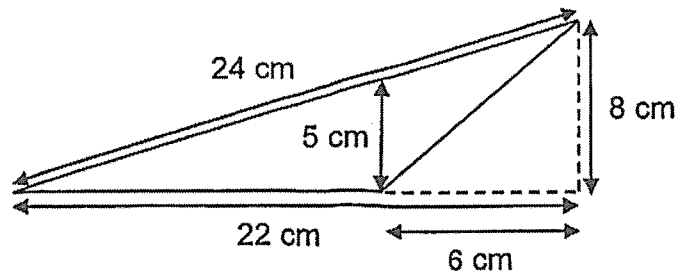
Which of the following is correct?

- (1)  $\angle c = \angle d$
  - (2)  $\angle b = \angle c$
  - (3)  $\angle a = \angle d$
  - (4)  $\angle a = \angle b$
6. A printer can print 18 books in 30 minutes.  
How many books can it print in 3 hours?
- (1) 36
  - (2) 54
  - (3) 108
  - (4) 180

7. Aini and Caili were queueing to enter a cafe. Aini was 5th in the queue. Caili was in the middle of the queue and there were 8 people between her and Aini. How many people were there in the queue?

- (1) 25
- (2) 26
- (3) 27
- (4) 28

8. Find the area of the triangle.



- (1)  $60 \text{ cm}^2$
  - (2)  $64 \text{ cm}^2$
  - (3)  $88 \text{ cm}^2$
  - (4)  $96 \text{ cm}^2$
9. The average mass of 4 children is 52 kg. David, who has a mass of 32 kg, joins the group. What is the average mass of the 5 children?

- (1) 42 kg
- (2) 48 kg
- (3) 60 kg
- (4) 84 kg

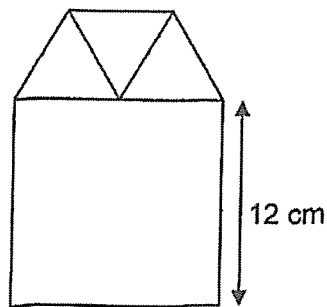
10. A wheel of radius 50 cm is rolled on a ground. How many complete turns must it make to travel a distance of 628 m? (Take  $\pi = 3.14$ )

- (1) 200
- (2) 2
- (3) 400
- (4) 4

11. Devi is 150 cm tall. She is taller than Alicia by 20%. What is Alicia's height?

- (1) 125 cm
- (2) 130 cm
- (3) 170 cm
- (4) 180 cm

12. The figure is made up of a square and 3 equilateral triangles. Find the perimeter of the figure.

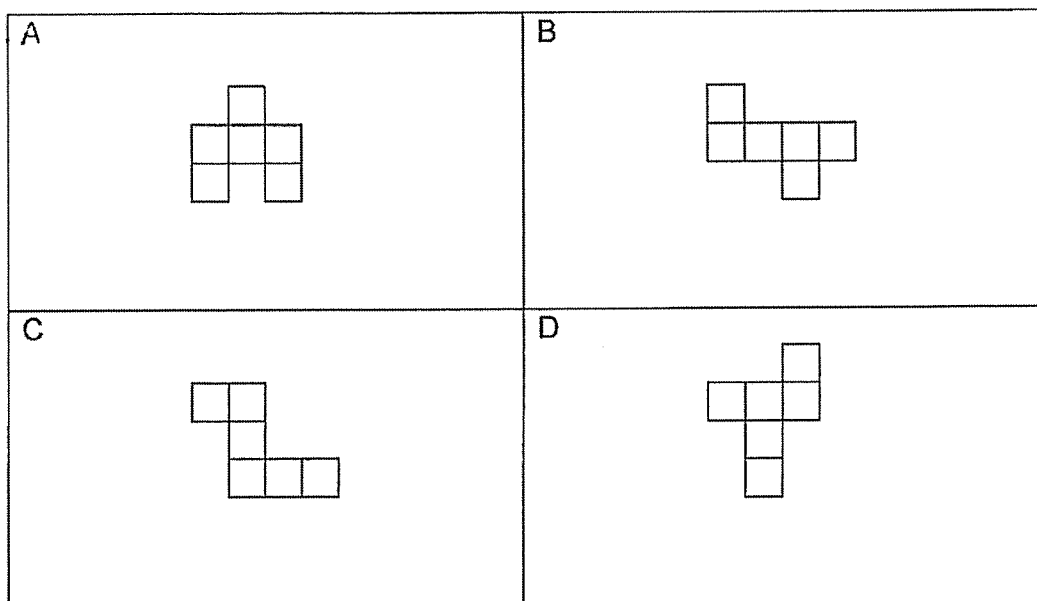


- (1) 78 cm
- (2) 66 cm
- (3) 54 cm
- (4) 48 cm

13. A pen costs \$5 more than a pencil. The cost of a pencil is \$ $p$ . Find the cost of 10 pencils and 5 pens in terms of  $p$ .

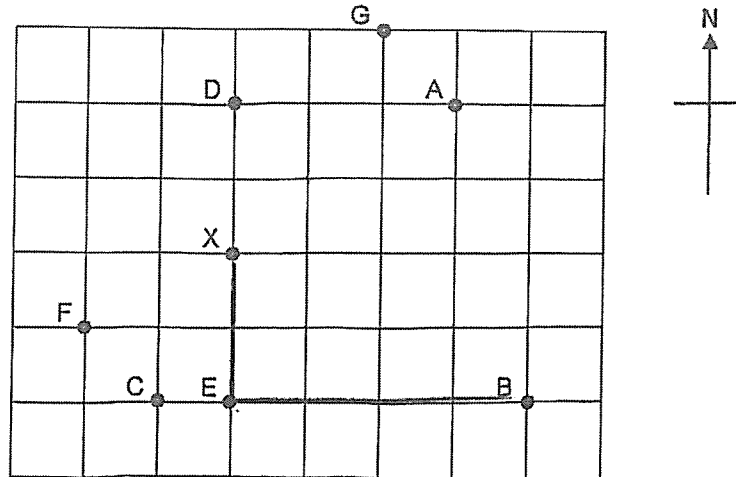
- (1)  $\$(5p + 50)$
- (2)  $\$(10p + 25)$
- (3)  $\$(10p + 75)$
- (4)  $\$(15p + 25)$

14. Which of the nets shown below can form a solid?



- (1) A and B
- (2) A and C
- (3) B and D
- (4) C and D

15.



Andy started walking south-east from a point. He reached a point and walked west. After reaching the next point, he walked north and stopped at X. Which of the following shows the correct path that Andy took?

- (1)  $B \rightarrow A \rightarrow D \rightarrow X$
- (2)  $D \rightarrow B \rightarrow E \rightarrow X$
- (3)  $F \rightarrow C \rightarrow E \rightarrow X$
- (4)  $G \rightarrow A \rightarrow D \rightarrow X$

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– End of Booklet A –







## 2024 PRIMARY 6 PRELIMINARY EXAMINATION

Name: \_\_\_\_\_ ( ) Date: 19 August 2024

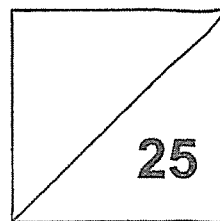
Class: Primary 6 ( ) Time: 8.00 a.m. – 9.00 a.m.

Parent's Signature \_\_\_\_\_

# MATHEMATICS

## PAPER 1

### (BOOKLET B)



### INSTRUCTIONS TO CANDIDATES

1. Write your name, class and register number.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Use a dark blue or black ballpoint pen to write your answers in the space provided for each question.
6. The use of calculators is **NOT** allowed.
7. Do not use correction fluid/tape.
8. Do not use highlighters on any part of your answers.

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)

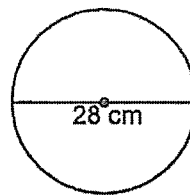
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16. Find the value of  $24.4 + 5.67$

Ans: \_\_\_\_\_

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17. Find the area of the circle shown below. (Take  $\pi = \frac{22}{7}$ )



Ans: \_\_\_\_\_ cm<sup>2</sup>

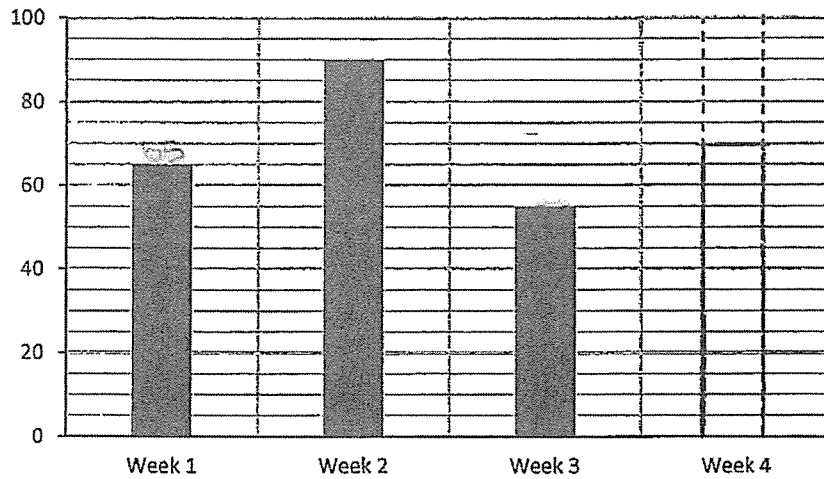
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18. A train travelled 336 km in 90 minutes. Find its speed.

Ans: \_\_\_\_\_ km/h

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19. The bar graph shows the number of students visiting the school library over 4 weeks.



The number of students in Week 4 is  $\frac{1}{3}$  of the total number of students from Week 1 to Week 3. Draw the bar representing the number of students for Week 4. You are not required to shade the bar.

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20. Simplify the expression  $9 - a + 2a - 5 + 8a$ .

Ans: \_\_\_\_\_

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

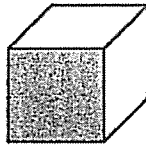
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21. David had some toy cars.  $\frac{1}{3}$  of them were red,  $\frac{1}{5}$  of them were blue and the rest were green. What fraction of the toy cars were green?

Ans: \_\_\_\_\_

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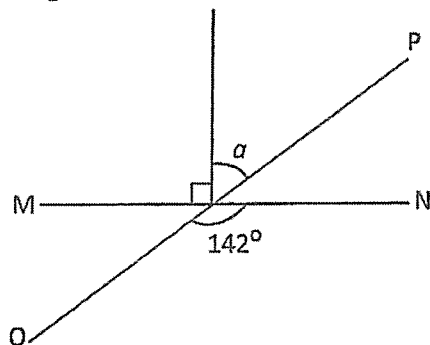
22. The volume of the cube below is  $125 \text{ cm}^3$ . Find the area of the shaded face.



Ans: \_\_\_\_\_  $\text{cm}^2$

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23. MN and OP are straight lines. Find  $\angle a$ .



Ans: \_\_\_\_\_<sup>o</sup>

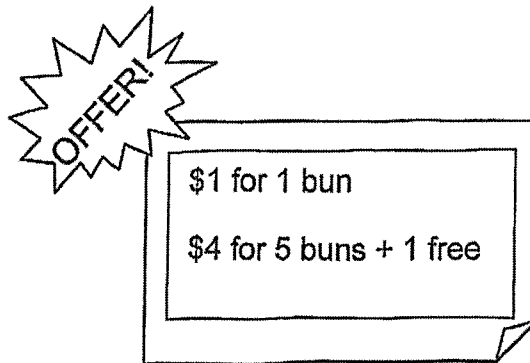
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24. 5 students read an average of 4 books in January.  
Another 2 students read an average of 6 books in the same month.  
How many books did the 7 students read in total in the month of January?

Ans: \_\_\_\_\_

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25.



Mrs Law needed 50 buns. How much would she have to pay?

Ans: \$ \_\_\_\_\_

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26. Ben made 2 ℓ of fruit juice. He completely filled some bottles with  $\frac{3}{5}$  ℓ of fruit juice each.

(a) How many bottles did he fill?

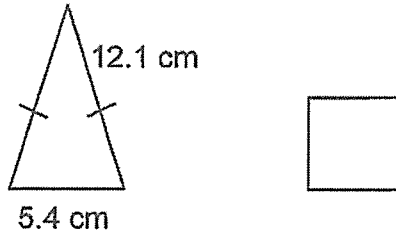
Ans: (a) \_\_\_\_\_

(b) How much juice was left?  
Give your answer as a fraction in the simplest form.

Ans: (b) \_\_\_\_\_ ℓ

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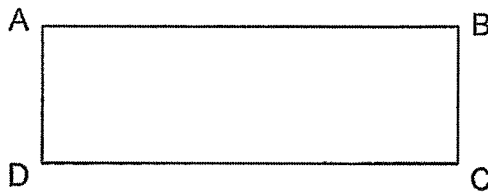
27. The perimeter of the triangle is 2 times the perimeter of the square.  
Find the length of one side of the square.



Ans: \_\_\_\_\_ cm

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28. In the figure below, the area of rectangle ABCD is  $48 \text{ cm}^2$ . The length is 3 times its breadth. Find the perimeter of rectangle ABCD.



Ans: \_\_\_\_\_ cm

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29. The usual price of a bicycle is \$400. During a sale, there is a discount of 25% for the bicycle. Find the selling price of the bicycle inclusive of 9% GST.

Ans: \$ \_\_\_\_\_

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30. Charlie had the same number of two-dollar notes and ten-dollar notes. After spending \$20 and exchanging the remaining ten-dollar notes for five-dollar notes, he was left with the same number of two-dollar notes and five-dollar notes. How much money did Charlie have at first?

Ans: \$ \_\_\_\_\_

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– End of Booklet B –  
– End of Paper 1 –





## 2024 PRIMARY 6 PRELIMINARY EXAMINATION

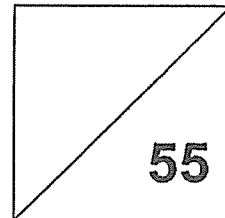
Name: \_\_\_\_\_ ( ) Date: 19 August 2024

Class: Primary 6 ( ) Time: 10.30 a.m. to 12.00 p.m.

Parent's Signature: \_\_\_\_\_

# MATHEMATICS

## PAPER 2



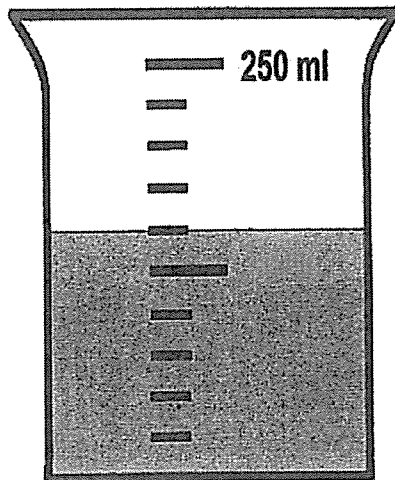
### INSTRUCTIONS TO CANDIDATE

1. Write your name, class and register no.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions. Write your answers in this booklet.
5. Show your working clearly.
6. Use a dark blue or black ballpoint pen to write your answers.
7. Do not use correction tape or highlighter for your solutions.
8. You are **allowed** to use a calculator.

Questions 1 to 5 carry 2 marks each. Show your workings 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. The figure shows the amount of water in a beaker. 50 ml of water was added into the beaker for the water to reach the level as shown. How much water was in the beaker at first?



Ans: \_\_\_\_\_ ℓ

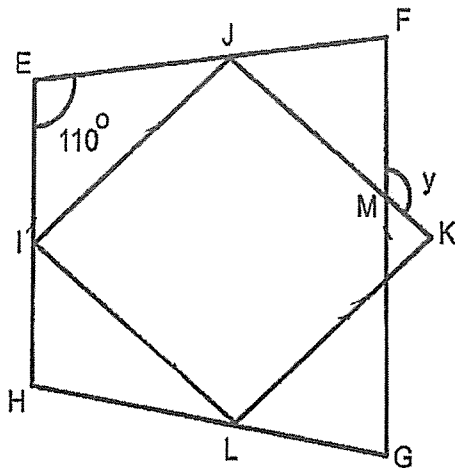
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2. The total number of marbles Sudin and James have is 384. The total number of marbles James and Raju have is 526. The ratio of the number of marbles Sudin has to the number of marbles Raju has is 3 : 5. Find the number of marbles James has.

Ans: \_\_\_\_\_

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3. EFGH is a trapezium with EH parallel to FG and IJKL is a parallelogram. JF = FM. Find  $\angle y$ .



Ans: \_\_\_\_\_°

4. A shop owner has 255 pens and pencils.  $\frac{1}{3}$  of the pens is equal to  $\frac{2}{9}$  of the pencils. Find the total number of pencils.

Ans: \_\_\_\_\_

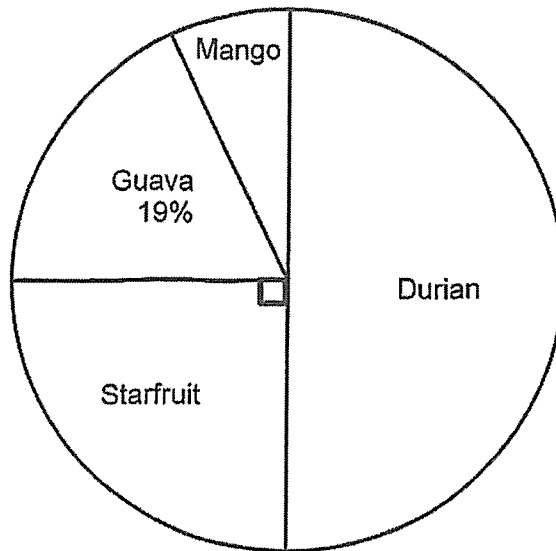
5. Ali is  $u$  cm tall. His mother is twice as tall as he is. His father is  $(30 + u)$  cm taller than him.  
Each of the statements below is either true, false or not possible to tell from the information given. Put a tick ( $\checkmark$ ) to indicate your answer.

Statement	True	False	Not possible to tell
Ali's mother is taller than Ali's father.			
The total height of Ali and his parents is $(32 + 4u)$ cm.			

For questions 6 to 17, show your workings 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. A total of 300 customers chose their favourite tropical fruits in a supermarket. The pie chart represents the customers' choices. Half of the customers chose Durian.



- (a) What fraction of the customers chose Mango?  
Give your answer in the simplest form.

Ans: \_\_\_\_\_ [1]

- (b) Find the total number of customers who chose Guava and Starfruit.

Ans: \_\_\_\_\_ [2]

7. The table shows the fines for overdue items from a library.

Item	Duration	Fine
Each book	1 <sup>st</sup> week	\$0.15 per day
	2 <sup>nd</sup> week onwards	\$0.30 per day
Each magazine	1 <sup>st</sup> week	\$0.10 per day
	2 <sup>nd</sup> week onwards	\$0.20 per day

(a) Nadrah returned a book which had been overdue for 6 days. How much did she pay for the overdue fines?

Ans: (a) \_\_\_\_\_ [1]

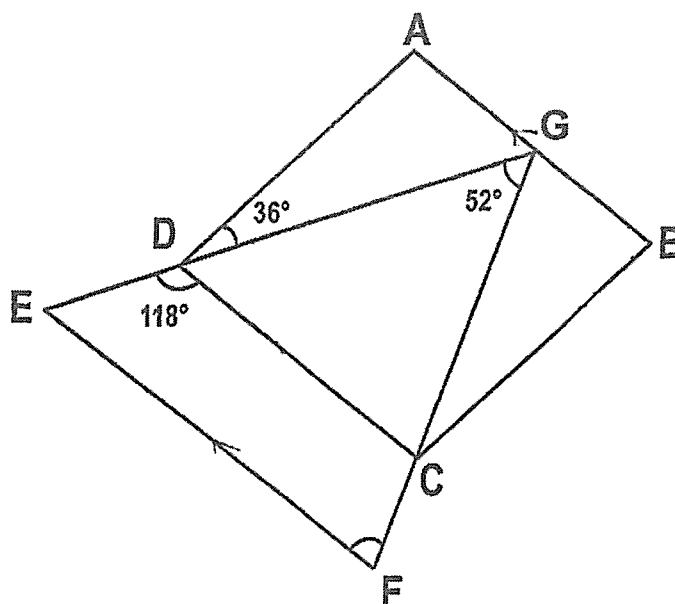
(b) Sue Ann paid \$3.45 for an overdue item. Name the item that was overdue.  
For how many days was the item overdue?

Ans: (b) Item: \_\_\_\_\_ [1]

Days overdue: \_\_\_\_\_ [1]

8. ABCD is a rhombus and EFG is a triangle. DC is parallel to EF.

(a) Find  $\angle ABC$ .



Ans: (a) \_\_\_\_\_ [2]

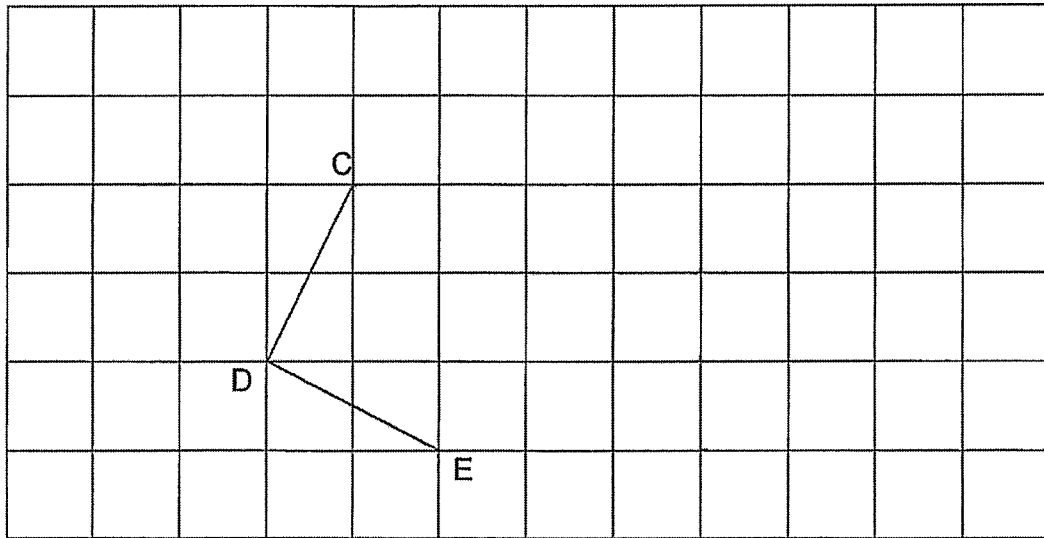
(b) Find  $\angle EFG$ .

Ans: (a) \_\_\_\_\_ [1]

9. In the square grid below, CD and DE are straight lines.  
 (a) Measure and write down the size of  $\angle CDE$ .

Ans: (a) \_\_\_\_\_ [1]

- (b) Draw two more straight lines to form a trapezium CDEF where  $CF = 2 \times DE$ . Use a pencil to draw your lines and label point F. [2]



○

10. The number of participants in a marathon increased by 25% in November as compared to October. The number of participants in December decreased by 30% as compared to November. The difference in the number of participants between October and December was 18.

- (a) Find the ratio of the number of participants in October to the number of participants in December. Give your answer in the simplest form.

Ans: \_\_\_\_\_ [1]

- (b) What was the total number of participants in December?

Ans: \_\_\_\_\_ [2]



11. Siti bought stickers from Shop A, Shop B, Shop C and Shop D. She bought an equal number of stickers from Shop C and Shop D.
- $\frac{1}{4}$  of the stickers were bought from Shop B.
- $\frac{2}{5}$  of the stickers were bought from Shop A.

(a) What fraction of the stickers was bought from Shop C?

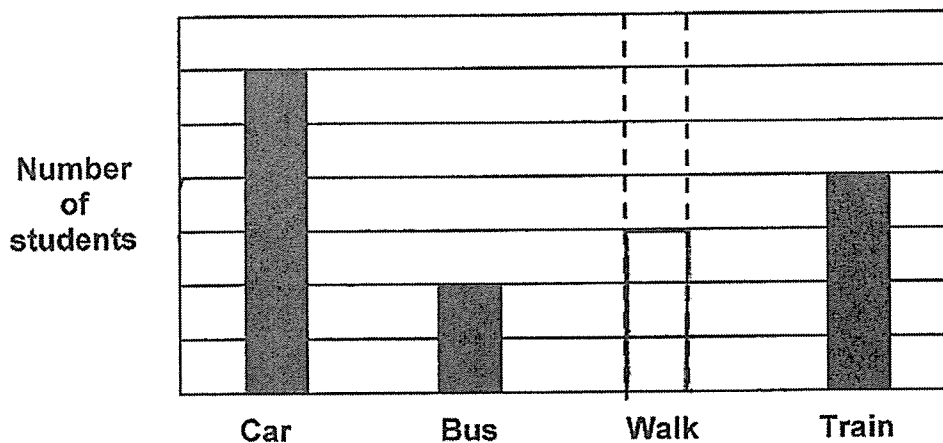
Ans: \_\_\_\_\_ [2]

(b) Siti bought 133 stickers from Shop D. What was the total number of stickers she bought?

Ans: \_\_\_\_\_ [2]

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12. The bar graph shows how a group of students travel to school.  
 The number of students is not shown on the scale.  
 The bar for the number of students who walk to school has not been drawn.



- (a)  $\frac{1}{5}$  of the total number of students walk to school.

Draw the bar representing the number of students who walk to school.

[1]

- (b) The number of students who travel by train is  $9p$ .

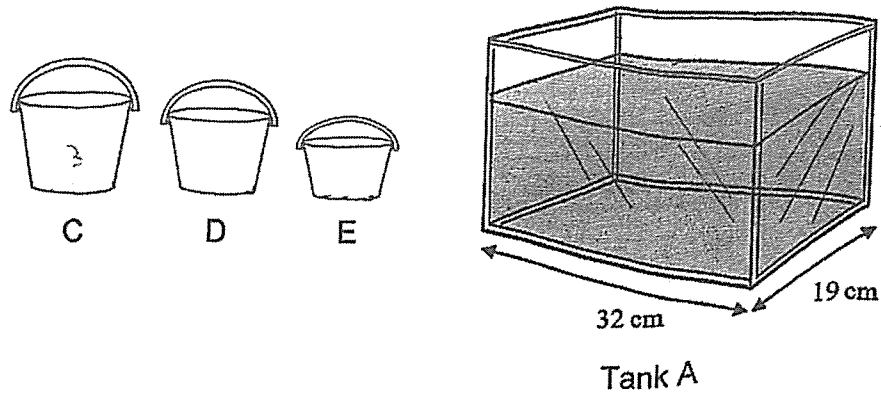
Find the number of students who travel by car.  
 Leave your answer in terms of  $p$ .

Ans: (a) \_\_\_\_\_ [2]

- (c) What is the difference between the number of students who travel by bus and those who travel by train when  $p = 40$ ?

Ans: (b) \_\_\_\_\_ [1]

13. Pails C, D and E are filled with water to the brim in the ratio 3 : 2 : 1. Pail D contains 4.56 l of water. 40% of the water from each pail is poured into an empty Tank A. Then 80% of Tank A is filled with water.



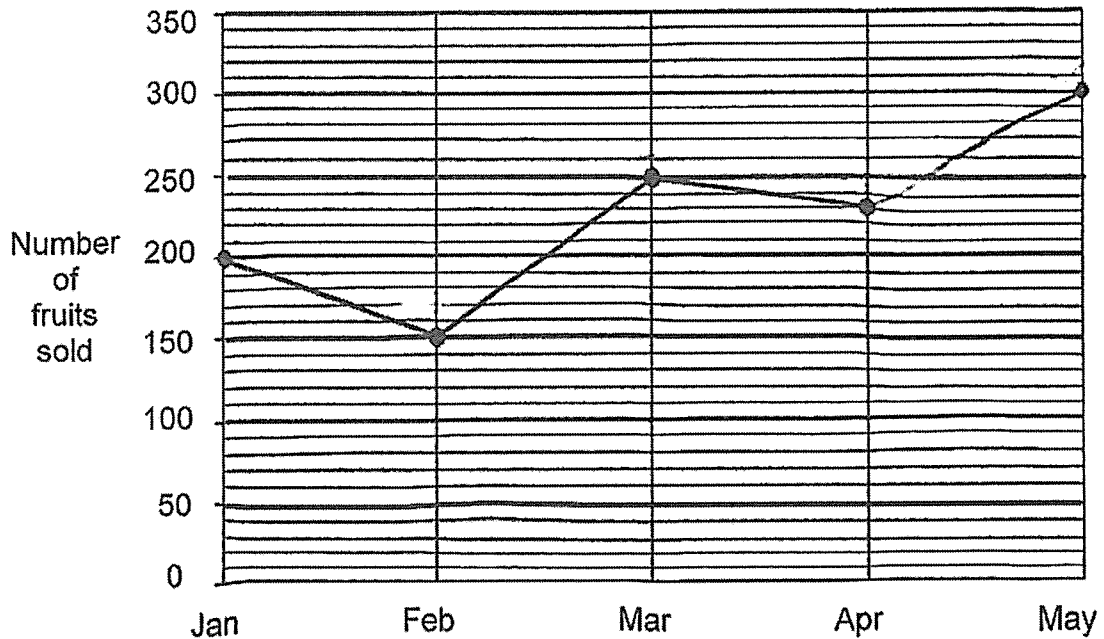
(a) What is the height of Tank A?

Ans: (a) \_\_\_\_\_ [3]

(b) Find the capacity of Tank A. Give your answer in litres.

Ans: (b) \_\_\_\_\_ [1]

14. The line graph shows the monthly sales of fruits from January to May.



(a) Which 1-month period shows the greatest increase in sales?

Ans: (a) \_\_\_\_\_ to \_\_\_\_\_ [1]

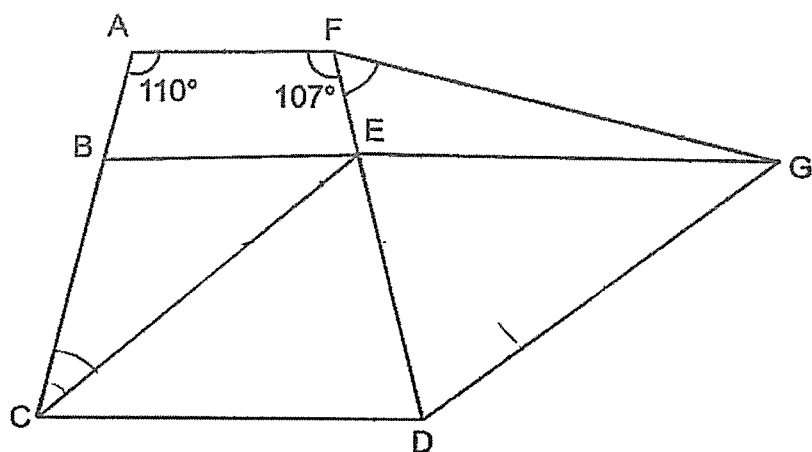
(b) What was the percentage decrease in the number of fruits sold from January to February?

Ans: (b) \_\_\_\_\_ [1]

(c) There were 15% more fruits sold in June than in May. What was the average number of fruits sold per month from February to June?

Ans: (c) \_\_\_\_\_ [2]

15. ECDG is a rhombus and ACDF is a trapezium with AF parallel to CD.



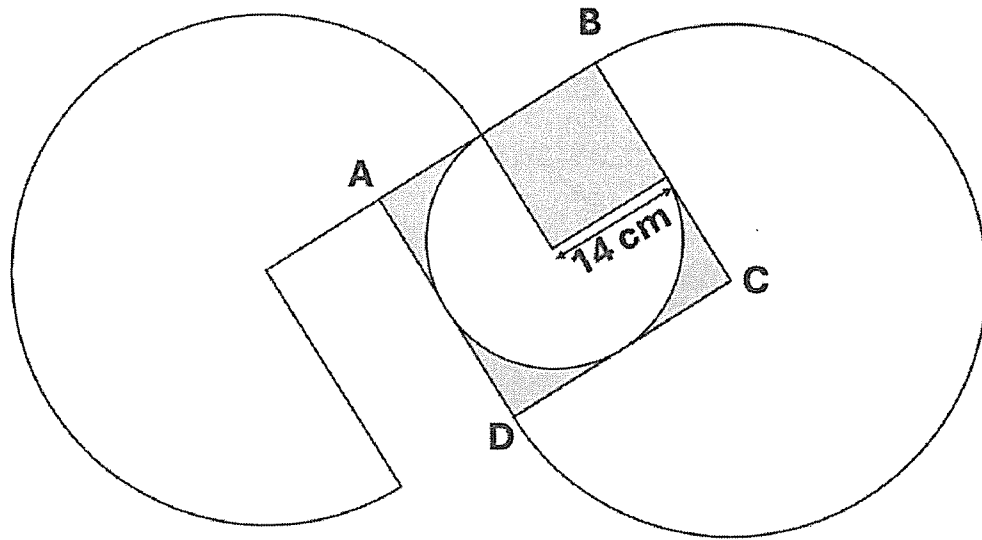
- (a) Find  $\angle BCE$ .

Ans: (a) \_\_\_\_\_ [3]

- (b) Find the sum of  $\angle EFG$  and  $\angle FGE$ .

Ans: (a) \_\_\_\_\_ [1]

16. The figure is formed by 2 large identical three-quarter circles and a small three-quarter circle within a square ABCD.



(Take  $\pi = \frac{22}{7}$ )

- (a) Find the total area of the shaded parts.

Ans: (a) \_\_\_\_\_ [2]

- (b) Find the perimeter of the figure.

Ans: (b) \_\_\_\_\_

17. The first three figures of a pattern are shown below.

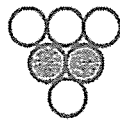


Figure 1

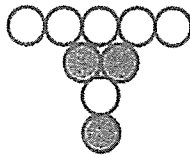


Figure 2

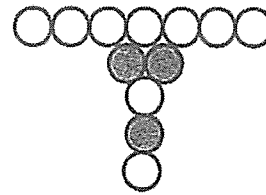


Figure 3

The table shows the number of white and grey circles used for each figure.

Figure Number	1	2	3	4
Number of white circles	4	6	9	
Number of grey circles	2	3	3	

- (a) Fill in the table for Figure 4. [2]  
 (b) What is the total number of white and grey circles in Figure 425?

Ans: b) \_\_\_\_\_ [1]

- (c) In Figure 425, what percentage of the circles are white?  
 Round your answer to 1 decimal place.

Ans: c) Figure \_\_\_\_\_ [2]

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- END OF PAPER 2 -





SCHOOL : TAO NAN PRIMARY SCHOOL

LEVEL : PRIMARY 6

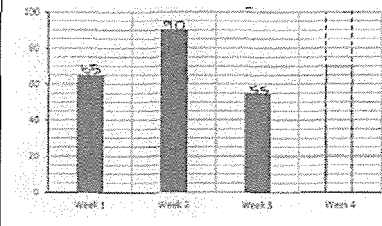
SUBJECT : MATH

TERM : 2024 PRELIM

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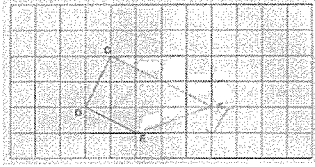
**BOOKLET A**

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

Q16)	30.07										
Q17)	616 cm <sup>2</sup>										
Q18)	224 km/h										
Q19)	 <table border="1"><caption>Bar Chart Data</caption><thead><tr><th>Week</th><th>Value</th></tr></thead><tbody><tr><td>Week 1</td><td>65</td></tr><tr><td>Week 2</td><td>90</td></tr><tr><td>Week 3</td><td>55</td></tr><tr><td>Week 4</td><td>0</td></tr></tbody></table>	Week	Value	Week 1	65	Week 2	90	Week 3	55	Week 4	0
Week	Value										
Week 1	65										
Week 2	90										
Week 3	55										
Week 4	0										
Q20)	$4 + 9a$										
Q21)	$7/15$										
Q22)	$125 = 5 \times 5 \times 5$ $5 \times 5 = 25 \text{ cm}^2$										
Q23)	$52^\circ$										
Q24)	$5 \times 4 + 2 \times 6 = 32$										

Q25	$5 + 1 = 6$ $50 \div 6 = 8 \text{ r } 2$ $8 \times 4 + 2 \times 1 = 32 + 2 = \$34$
Q26	a) 3 b) $\frac{1}{5}$
Q27	$5.4 + 12.1 + 12.1 = 29.6$ $29.6 \div 2 = 14.8$ $14.8 \div 4 = 3.7\text{cm}$
Q28	$48 \div 3 = 16$ $16 = 4 \times 4$ $4 \times 3 = 12$ $12 \times 2 + 4 \times 2 = 32\text{cm}$
Q29	$100\% - 25\% = 75\%$ $400/100 \times 75 = 300$  $100\% + 9\% = 109\%$ $300/100 \times 109 = \$327$
Q30	$2 - 1 = 1$ $1 \times 10 = 10$ $20 \div 10 = 2$ $4 \times 2 = 8$ $4 \times 10 = 40$ $40 + 8 = \$48$

	<b>PAPER 2</b>
Q1)	$150\text{ml} - 50\text{ml} = 100\text{ml}$ $= 0.1 \text{ L}$
Q2)	$526 - 384 = 142$ $5 - 3 = 2$ $142 \div 2 \times 3 = 213$ $384 - 213 = 171$
Q3)	$\angle EFG = 180 - 110 = 70^\circ$ $\angle FMJ = (180 - 70) \div 2 = 55^\circ$ $\angle y = 180 - 55 = 125^\circ$
Q4)	$1/3 = 2/6$ $6 + 9 = 15$ $255 \div 15 \times 9 = 153$
Q5)	False False
Q6)	a) $100\% - 19\% - 25\% - 50\% = 6\%$ $6/100 = 3/50$ b) $19\% + 25\% = 44\%$ $300/100 \times 44 = 132$
Q7)	a) $0.15 \times 6 = \$0.90$ b) 1 week has seven days $0.15 \times 7 = 1.05$ $3.45 - 1.05 = 2.40$ $2.40 \div 0.30 = 8 \text{ (days)}$ $8 + 7 = 15$ a) book b) 15

Q8)	<p>a) <math>\angle GDC = 180 - 118 = 62^\circ</math>  <math>\angle ADC = 62 + 36 = 98^\circ</math>  <math>\angle ABC = \angle ADC = 98^\circ</math></p> <p>b) <math>\angle GEF = 180 - 118 = 62^\circ</math>  <math>\angle EFG = 180 - 52 - 62 = 66^\circ</math></p>
Q9)	<p>a) <math>91^\circ</math></p> <p>b)</p> 
Q10)	<p>a) <math>8 : 7</math></p> <p>b) <math>8 - 7 = 1</math>  <math>18 \div 1 = x \cdot 7 = 126</math></p>
Q11)	<p>a) <math>1 - \frac{1}{4} - \frac{2}{3} = \frac{20}{20} - \frac{5}{20} - \frac{8}{20} = \frac{7}{20}</math>  <math>\frac{7}{20} \div 2 = \frac{7}{20} \times \frac{1}{2} = \frac{7}{40}</math></p> <p>b) <math>\frac{7}{20} - \frac{7}{40} = \frac{7}{40}</math>  <math>133 \div 7 \times 40 = 760</math></p>
Q12)	<p>a) <math>6u + 2u + 4u = 12u</math>  <math>12u \div 4 = 3u</math></p> <p>b) <math>9p \div 4 \times 6 = 13.5p</math></p> <p>c) <math>9p \div 4 \times 2 = 4.5p</math>  <math>9p - 4.5p = 4.5p</math>  When <math>p = 40</math>  <math>4.5p = 40 \times 4.5 = 180</math></p>

Q13)	<p>a) 11.25 cm</p> <p>b) 6.84 L</p>
Q14)	<p>a) <math>250 - 150 = 100</math>  <math>300 - 230 = 70</math>  February to March</p> <p>b) <math>200 - 150 = 50</math>  <math>50/200 \times 100\% = 25\%</math></p> <p>c) <math>100\% + 15\% = 115\%</math>  <math>300/100 \times 115 = 345</math>  <math>150 + 250 + 230 + 300 + 345 = 1275</math>  <math>1275 \div 5 = 255</math></p>
Q15)	<p>a) <math>\angle BCD = 180 - 110 = 70^\circ</math>  <math>\angle EDC = 180 - 107 = 73^\circ</math>  <math>\angle ECD = 180 - 2 \times 73 = 34^\circ</math>  <math>\angle BCE = 70 - 34 = 36^\circ</math></p> <p>b) <math>\angle GED = \angle EDC = 73^\circ</math>  <math>\angle EFG + \angle FGE = \angle GED = 73^\circ</math></p>
Q16)	<p>a) <math>14 \times 2 = 28</math>  <math>28 \times 28 = 784</math>  <math>\frac{3}{4} \times \frac{22}{7} \times 14 \times 14 = 462</math>  <math>784 - 462 = 322 \text{ cm}^2</math></p> <p>b) <math>28 \times 2 = 56</math>  <math>\frac{22}{7} \times 56 = 176</math>  <math>\frac{3}{4} \times 176 = 132</math>  <math>132 + 132 + 14 + 28 + 28 + 14 = 348 \text{ cm}</math></p>

Q17)	a)11 4 b)(425 + 1) x 3 = 1278 c)425 - 1 = 424 424 ÷ 2 = 212 212 x 5 = 1060 1060 + 4 = 1064 1064/1278 x 100% ~83.3%
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