



NANYANG PRIMARY SCHOOL
PRELIMINARY EXAMINATION
2026

PRIMARY 6
MATHEMATICS
PAPER 1
(BOOKLET A)

Total Time for Booklets A and B: 1 hour 10 minutes

Additional materials: Optical Answer Sheet (OAS)

INSTRUCTIONS TO CANDIDATES

1. Write your name and index number in the space provided.
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.

Name: _____ ()

Class: Primary 6 ()

This booklet consists of 12 printed pages and 4 blank pages.

Questions **1** to **10** carry 1 mark each. Questions **11** to **18** 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. (26 marks)

1 Round 275 893 to the nearest thousand.

(1) 275 000

(2) 276 000

(3) 280 000

(4) 300 000

2 In 56.78, which digit is in the tenths place?

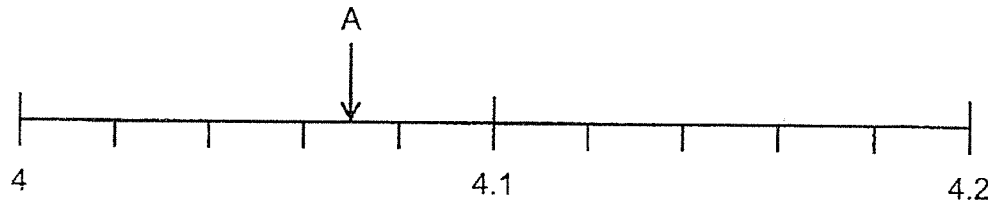
(1) 5

(2) 6

(3) 7

(4) 8

- 3 The figure below shows a number line. Which of the following is the closest to the reading of A?



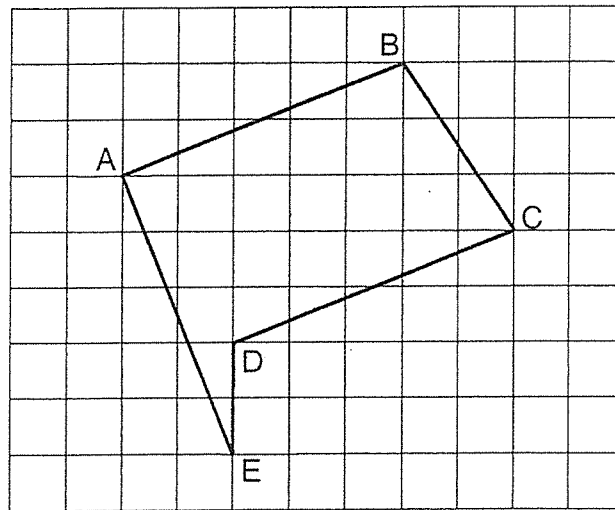
- (1) 4.06
 (2) 4.07
 (3) 4.35
 (4) 4.70
- 4 Four packages have the following masses:

Package	Mass
A	2.05 kg
B	1 kg 95 g
C	2500 g
D	2 kg 9 g

Which of the following shows the packages arranged in order from the lightest to heaviest?

- Lightest Heaviest
- (1) B, D, A, C
 (2) B, A, D, C
 (3) C, D, A, B
 (4) C, A, D, B

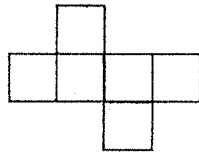
- 5 Which two lines are perpendicular to each other?



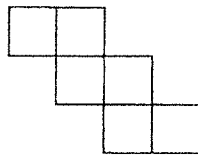
- (1) BC and CD
- (2) AB and DC
- (3) AB and AE
- (4) AE and ED

6 Which of the following is **not** a net of a cube?

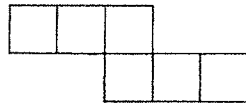
(1)



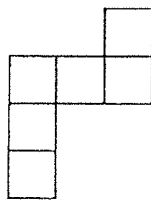
(2)



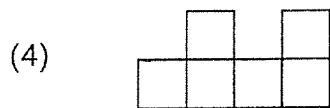
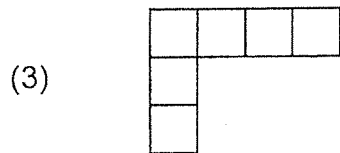
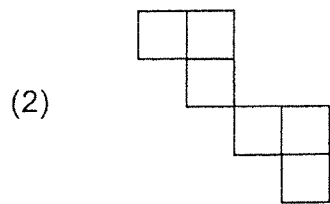
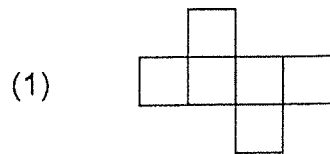
(3)



(4)



- 7 Each figure below is made up of 6 identical squares.
Which of the following has a line of symmetry?

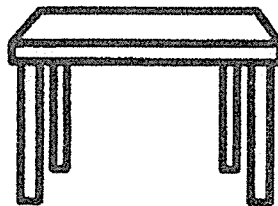


- 8 A baker sold n cupcakes in the morning.
In the afternoon, he sold 3 times as many cupcakes as in the morning.
The baker sold 84 cupcakes altogether.
How many cupcakes did he sell in the morning?

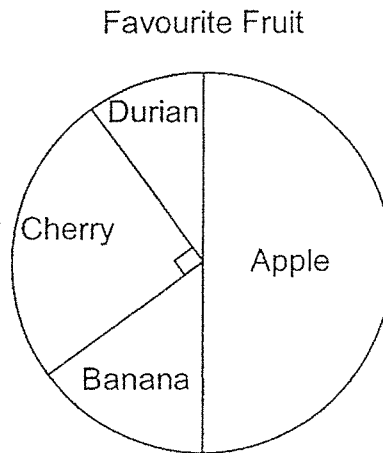
- (1) 21
- (2) 28
- (3) 42
- (4) 63

- 9 Which of the following is likely to be the height of a desk in a classroom?

- (1) 7 cm
- (2) 7 m
- (3) 70 cm
- (4) 70 m

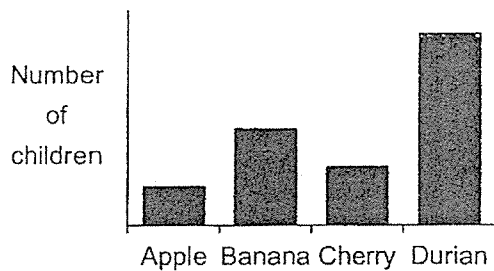


- 10 A group of children was asked to choose their favourite fruit from apple, banana, cherry and durian. The pie chart below represents the children's choices.

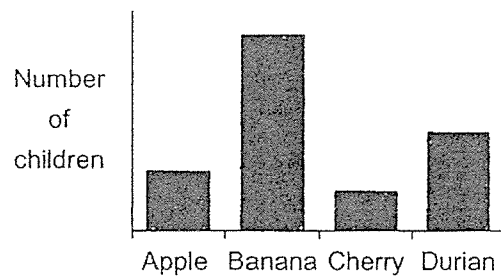


Which bar graph best represents the information in the pie chart?

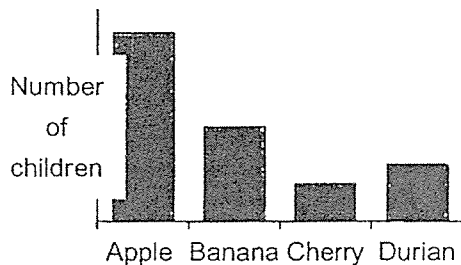
(1)



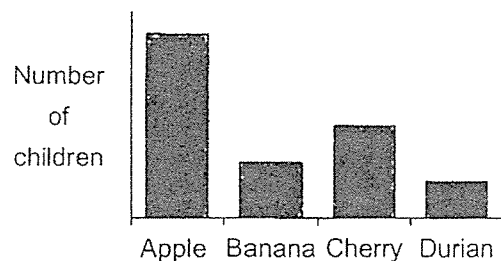
(2)



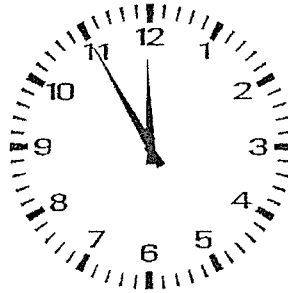
(3)



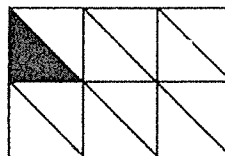
(4)



- 11 Ranesh's clock showed the time below. His clock was 15 minutes slow. What was the actual time?



- (1) 11:40
(2) 11:55
(3) 12:10
(4) 1:10
- 12 The figure below is made up of identical triangles. How many more triangles must be shaded such that $\frac{3}{4}$ of the figure is shaded?



- (1) 8
(2) 2
(3) 3
(4) 9

- 13 Arrange the following fractions from the greatest to the smallest.

$$1\frac{2}{3}, \quad \frac{8}{5}, \quad 1\frac{5}{7}$$

Greatest

Smallest

(1) $\frac{8}{5}, \quad 1\frac{5}{7}, \quad 1\frac{2}{3}$

(2) $1\frac{2}{3}, \quad 1\frac{5}{7}, \quad \frac{8}{5}$

(3) $1\frac{5}{7}, \quad \frac{8}{5}, \quad 1\frac{2}{3}$

(4) $1\frac{5}{7}, \quad 1\frac{2}{3}, \quad \frac{8}{5}$

- 14 The total mass of an apple and a papaya is $\frac{9}{10}$ kg. The mass of the apple is $\frac{1}{5}$ kg. Find the difference between the mass of the papaya and the mass of the apple.

(1) $\frac{1}{2}$ kg

(2) $\frac{7}{10}$ kg

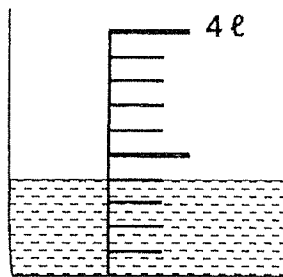
(3) $\frac{11}{10}$ kg

(4) $\frac{9}{50}$ kg

- 15 Betty had \$7.50 more than Alex. After Alex gave \$2.50 to Betty, Betty had \$16.70. How much money did Alex and Betty have altogether?

- (1) \$18.40
- (2) \$20.90
- (3) \$23.40
- (4) \$25.90

- 16 Find the volume of water in the container below.

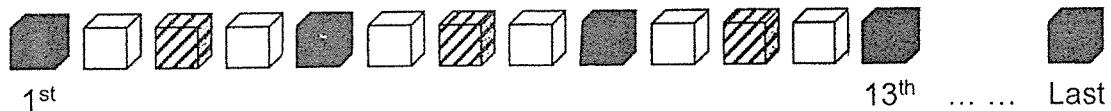


- (1) 40 ml
- (2) 400 ml
- (3) 800 ml
- (4) 1600 ml

- 17 Jia Le saves \$5 of his weekly allowance and spends the rest of it. When he decreases his spending by 20%, his savings increases by 60%. What is Jia Le's weekly allowance?

- (1) \$6
- (2) \$8
- (3) \$15
- (4) \$20

- 18 David arranged some cubes in a row forming a repeated pattern as shown below. The first cube and the last cube in the row formed were black cubes. There were 2 white cubes and 1 striped cube between every 2 black cubes.



Altogether, there were 18 black cubes in the row formed. What was the total number of white cubes?

- (1) 9
- (2) 18
- (3) 34
- (4) 36

(Go on to Booklet B)



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PRELIMINARY EXAMINATION
2026

PRIMARY 6
MATHEMATICS
PAPER 1
(BOOKLET B)

Total Time for Booklets A and B: 1 hour 10 minutes

INSTRUCTIONS TO CANDIDATES

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3. Follow all instructions carefully.
4. Answer all questions.
5. Write your answers in this booklet.
6. The use of calculators is **NOT** allowed.

Name: _____ ()

Class: Primary 6 ()

Booklet B

/ 24

This booklet consists of 9 printed pages and 3 blank pages.

Questions 19 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. (24 marks)

19 Write down all the common multiples of 3 and 4 that are smaller than 30.

Ans: _____

20 (a) Express $7\frac{19}{20}$ as a decimal.

Ans: (a) _____

(b) Express $\frac{27}{6}$ as a mixed number in the simplest form.

Ans: (b) _____

- 21 (a) Find the value of $1.5 \div 30$

Ans: (a) _____

- (b) Find the value of $95.02 - 5.2$

Ans: (b) _____

- 22 Bob had a 1070 cm long string. He bought another 3 m of string. What was the total length of his strings? Give your answer in metres.

Ans: _____ m

- 23** Ms Mak bought 80 stickers.
She used r stickers and gave the remaining stickers equally to 4 friends.

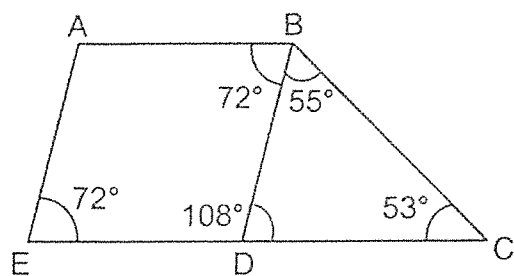
(a) What was the number of stickers each friend received in terms of r ?

Ans: (a) _____

(b) How many stickers did each friend receive when $r = 24$?

Ans: (b) _____

- 24 In the figure below, ABDE is a parallelogram and ABCE is a trapezium.



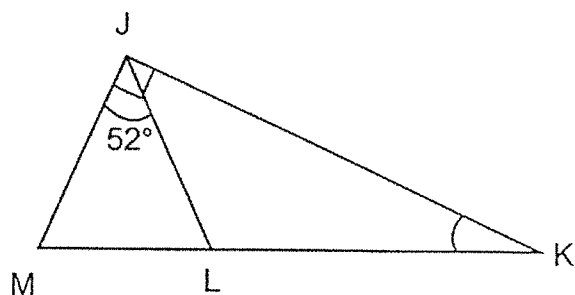
- (a) Find $\angle ABD$.

Ans: (a) _____ $^\circ$

- (b) Find $\angle BCD$.

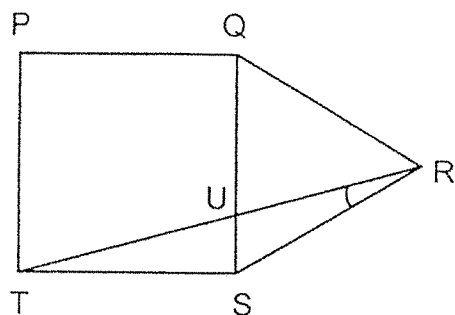
Ans: (b) _____ $^\circ$

- 25 In the figure below, JKM is a right-angled triangle and $JL = JM$.
Find $\angle JKM$.



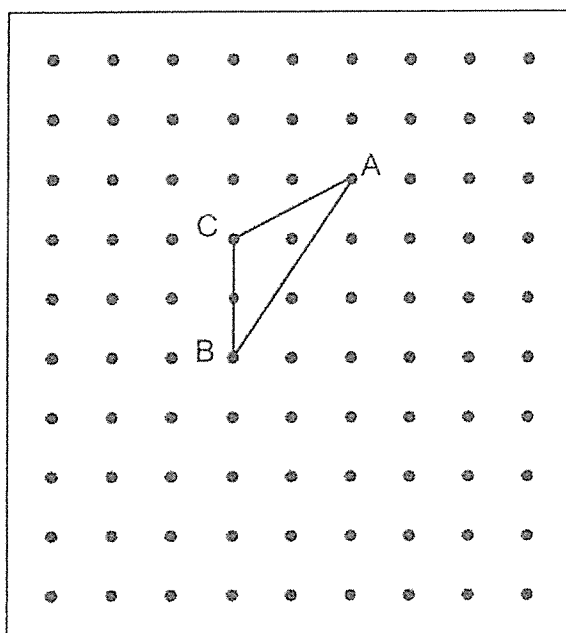
Ans: _____°

- 26 In the figure below, PQST is a square and QRS is an equilateral triangle.
TUR is a straight line. Find $\angle TRS$.

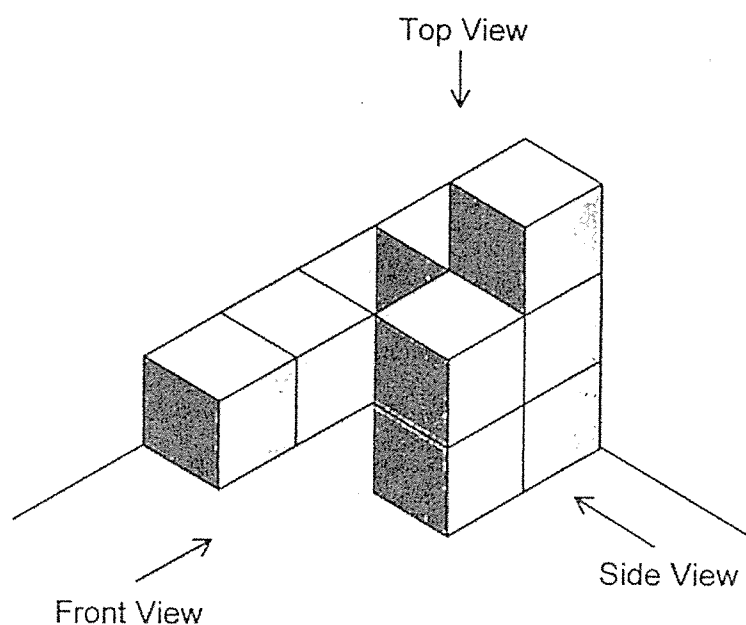


Ans: _____°

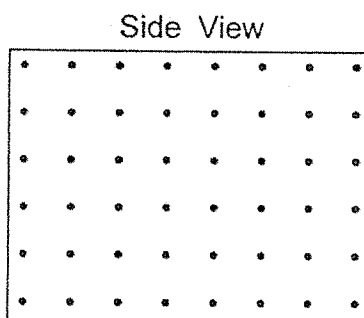
27. A triangle ABC is drawn on the square grid inside a box below. By joining dots on the grid with straight lines,
- (a) draw a parallelogram ABDE such that AE is twice as long as AC.
 - (b) draw another triangle ABF such that it has the same area as triangle ABC. Triangle ABF must not overlap with parallelogram ABDE.



- 28 The solid below is made up of 10 unit cubes.



- (a) Draw the side view of the solid on the grid below.



- (b) Find the greatest number of unit cubes that can be added to the solid without changing the side view and top view.

Ans: (b) _____

- 29 At a bakery, cupcakes are sold at the price shown below. Mrs Loh needs 302 cupcakes for her daughter's birthday party. What is the least amount of money she will have to spend?

Buy 6 cupcakes and
get 1 more free.

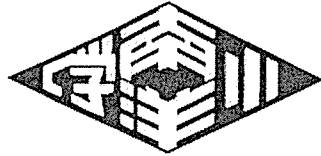


Ans: \$ _____

- 30 There was 5 ℓ of water in a bottle. Kiara poured the water in the bottle into as many identical cups as possible. Each cup contained $\frac{3}{5}$ ℓ of water. How much water was left in the bottle?

Ans: _____ ℓ

End of Paper



**NANYANG PRIMARY SCHOOL
PRELIMINARY EXAMINATION
2026**

**PRIMARY 6
MATHEMATICS
PAPER 2**

Time: 1 hour 20 minutes

INSTRUCTIONS TO CANDIDATES

1. Write your name and index number in the space provided.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Write your answers in this booklet.
6. The use of an approved calculator is allowed.

Name: _____ ()

Class: Primary 6 ()

Parent's Signature: _____

Please sign and return the examination paper the next day. Any queries should be raised at the time when the paper is returned.

Booklet A	/ 26
Booklet B	/ 24
Paper 2	/ 50
Total	/ 100

This booklet consists of 18 printed pages and 2 blank pages.

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)

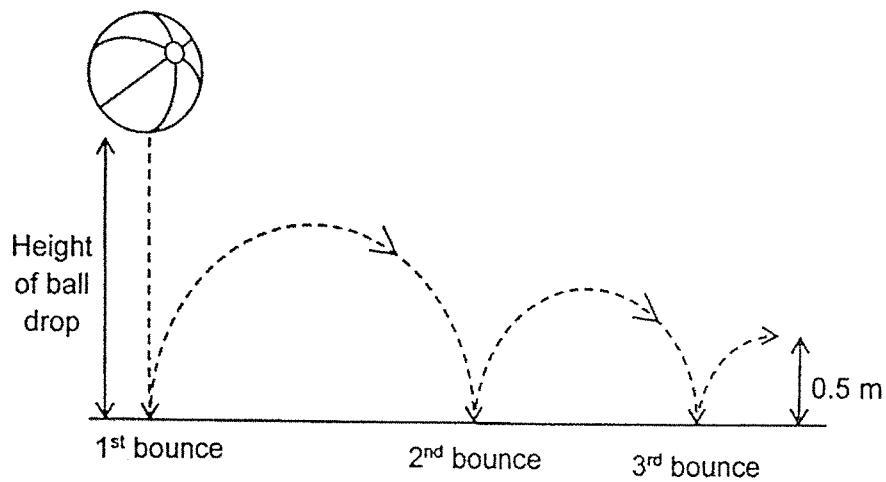
- 1 Colin collected h stamps.
Yvonne collected 15 more stamps than Colin.
The total number of stamps Colin and Yvonne collected was 91.
How many stamps did Colin collect?

Ans: _____

- 2 The average number of stickers bought by a group of 7 students was 14.
One of the students in the group bought 24 stickers.
What was the average number of stickers bought by the other 6 students in the group?

Ans: _____

- 3 A ball is dropped at a height as shown in the figure below. Every time the ball bounces, the greatest height it reaches is $\frac{2}{3}$ of the greatest height it last reached. On the 3rd bounce, the ball reaches the greatest height of 0.5 m. At what height is the ball dropped? Give your answer in metres and round your answer to 2 decimal places.

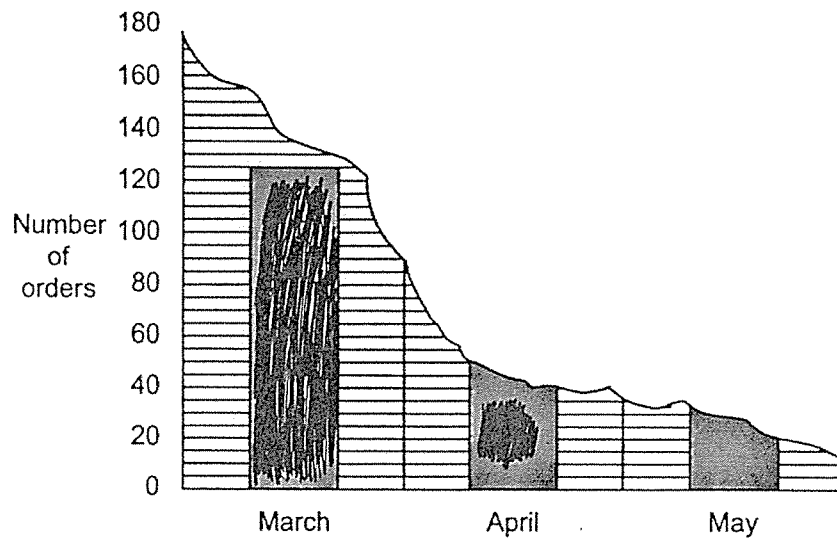


Ans: _____ m

- 4 Ariff paints 3 rooms in 8 days. Ben paints 3 rooms in 4 days. How many days will it take both of them to paint 36 rooms when they work together?

Ans: _____

- 5 The bar graph shows the number of orders a florist received each month from March to May. Part of the bar graph had been torn off.

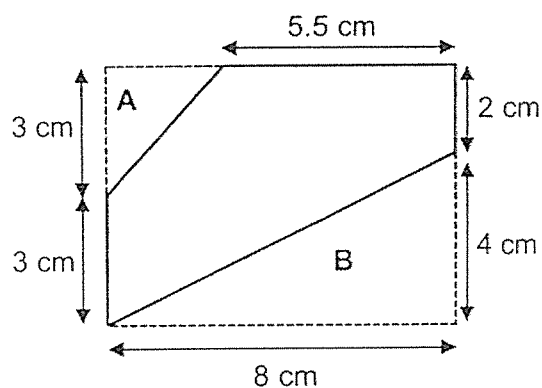


In April, there was a 52% decrease in the number of orders received compared to March. In May, there was a 200% increase in the number of orders received compared to April. How many orders were received in May?

Ans: _____

For questions 6 to 15, show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. The number of marks available is shown in brackets [] at the end of each question or part-question. (40 marks)

- 6 Triangle A and triangle B were cut from a rectangular piece of paper to form the figure shown below. The area of triangle B is 16 cm^2 . Find the area of triangle A.



Ans: _____ cm^2 [3]

- 7 A student recorded his test scores for 3 subjects in his student diary. He accidentally spilled some orange juice onto his student diary and his scores for the three subjects were smudged.

Score	
English	 8
Mathematics	5 
Science	 

The average score for Mathematics and Science was 6 more than the average score for English and Science.

- (a) What was his score for Mathematics?

Ans: _____ [1]

- (b) The average score for English and Mathematics was 5 more than the average score for the 3 subjects.
What was his score for Science?

Ans: _____ [2]

- 8 Mrs Ang baked a total of 360 cookies and muffins. After she gave away $\frac{4}{7}$ of the muffins and $\frac{5}{8}$ of the cookies, she had a total of 141 cookies and muffins left. How many cookies did Mrs Ang give away?

Ans: _____ [3]

- 9 Tank A is a rectangular tank with a square base. Tank A has a volume of 2592 cm^3 . The height of tank A is $\frac{3}{2}$ of the length of tank A.

(a) What is the length of tank A?

Ans: (a) _____ cm [3]

- (b) Tank B is a cubical tank. The length of tank B is twice the length of tank A. Find the volume of tank B.

Ans: (b) _____ cm^3 [1]

- 10 The ratio of Eli's number of stickers to Devi's number of stickers is 4 : 7.
The ratio of Faizal's number of stickers to Eli's number of stickers is 5 : 6.

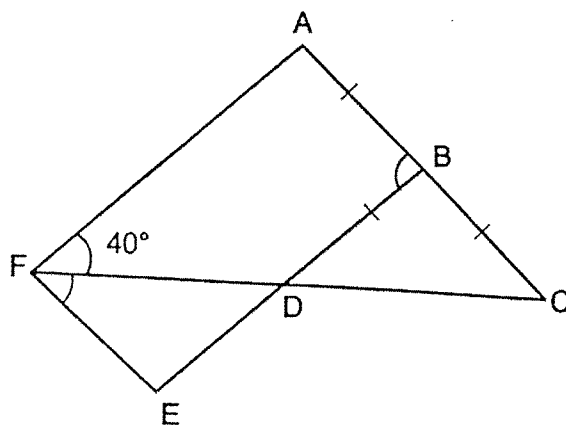
(a) What fraction of Devi's number of stickers is Faizal's number of stickers?

Ans: (a) _____ [2]

(b) The difference between Faizal's number of stickers and Eli's number of stickers is 18. How many stickers does Devi have?

Ans: (b) _____ [2]

- 11 In the figure below, ABDF is a trapezium. AF is parallel to BD. BD = BC. ABC, BDE and CDF are straight lines.



- (a) Find $\angle ABD$.

Ans: (a) _____° [2]

- (b) The figure above is not drawn to scale. Each of the statements below is either true, false or not possible to tell from the information given. For each statement, put a tick (✓) to indicate your answer.

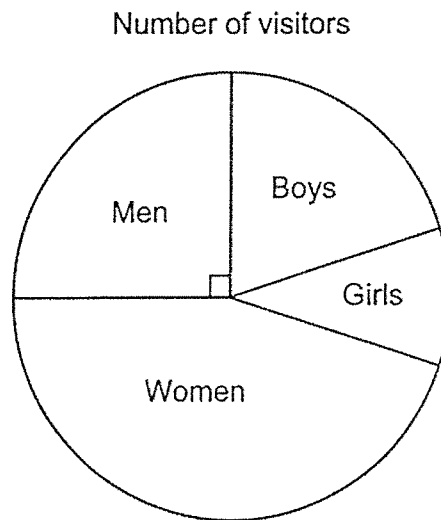
Statement	True	False	Not possible to tell
FA is perpendicular to AC.			
ACF is an isosceles triangle.			
ABEF is a parallelogram.			

[2]

- 12 The pie chart below shows the number of visitors who went to a museum on a Saturday.

The number of children is $\frac{2}{3}$ the number of women.

The number of boys who visited the museum was twice the number of girls.



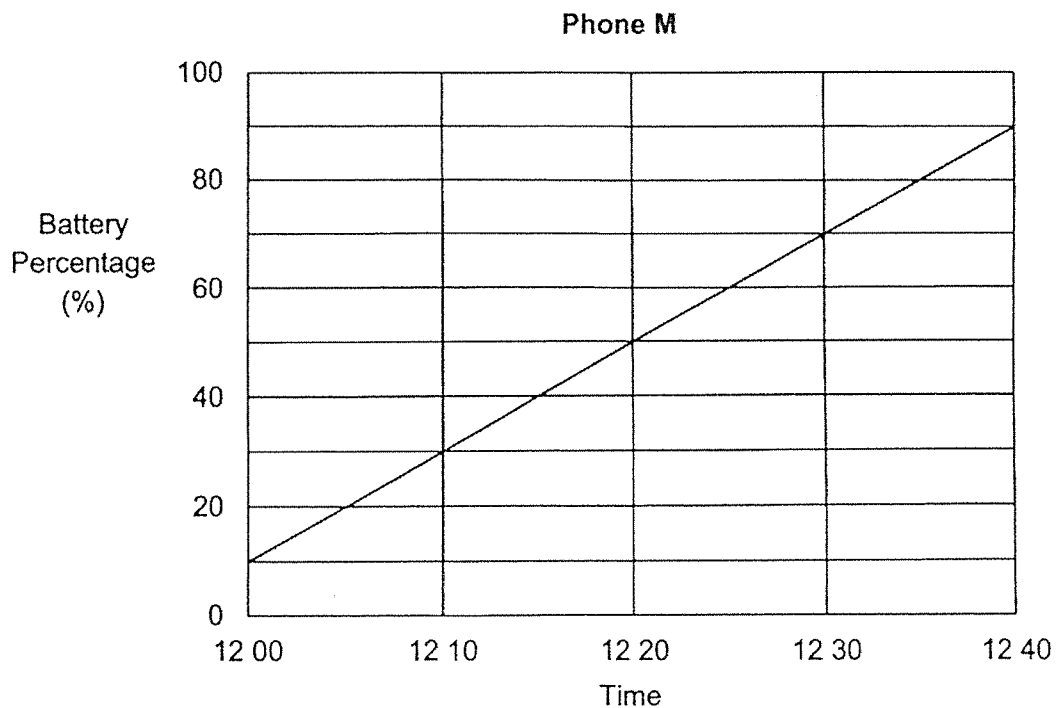
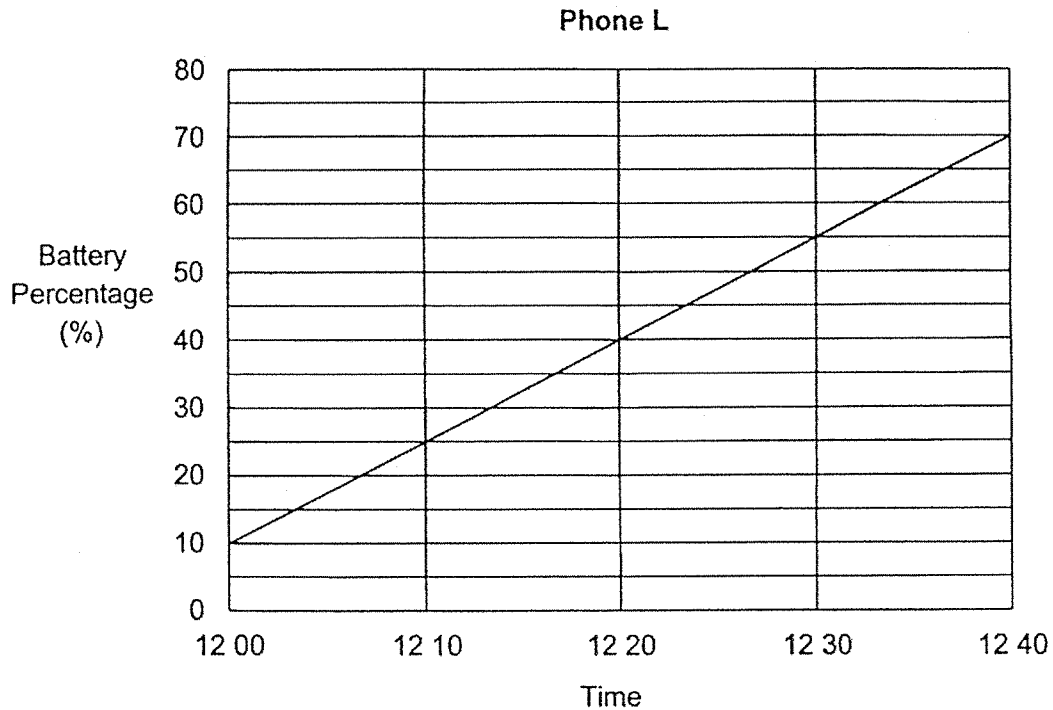
- (a) What fraction of the total number of visitors were women?
Give your answer in the simplest form.

Ans: (a) _____ [2]

- (b) What percentage of the total number of visitors were girls?

Ans: (b) _____% [2]

- 13 The graphs below show the battery percentage of two mobile phones, Phone L and Phone M, from 12 00 to 12 40. At 12 00, both phones had a battery percentage of 10% and were plugged into two different phone chargers.



(a) At what time did Phone L reach the battery percentage of 40%?

Ans: (a) _____ [1]

(b) What was the battery percentage of Phone M at 12 30?

Ans: (b) _____ % [1]

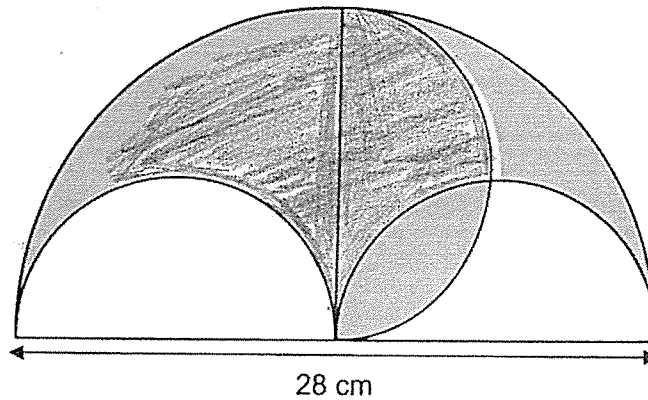
(c) Which phone has a higher rate of increase in the battery percentage per minute? Show your working to justify your answer.

Ans: (c) _____ [2]

(d) The rate of increase in the battery percentage of Phone L did not change throughout. At what time did Phone L reach the battery percentage of 100%?

Ans: (d) _____ [1]

- 14 The figure shows a large semicircle and 3 identical small semicircles. The diameter of the large semicircle is 28 cm.



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

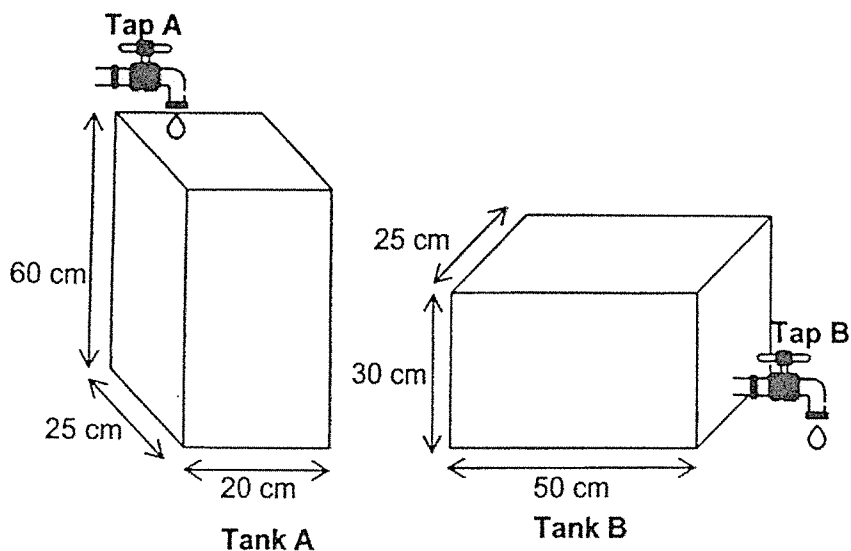
- (a) Find the area of the large semicircle.

Ans: (a) _____ cm^2 [2]

(b) Find the area of the shaded part.

Ans: (b) _____ cm^2 [3]

- 15 At first, tank A is empty and tank B is completely filled with water. Water flowed into tank A from tap A at a rate of 2.65 l/min . Water flowed out of tap B at a rate of 2.75 l/min .



- (a) What is the rate of increase in the height of the water level in tank A in cm per minute?

Ans: (a) _____ cm/min [1]

- (b) What is the rate of decrease in the height of water level in tank B in cm per minute?

Ans: (b) _____ cm/min [1]

- (c) Both taps are turned on at the same time. After some time, the height of the water level in tank A was the same as that in tank B. How long does it take for the height of the water level to be the same in both tank A and tank B? Find the height of the water level when it is the same in both tank A and tank B.

Ans: (c) Time taken:

_____ min

Height of water level:

_____ cm [3]

End of Paper



NANYANG PRIMARY SCHOOL
PRELIMINARY EXAMINATION
2026

PRIMARY 6
MATHEMATICS
PAPER 1
(BOOKLET A)

Total Time for Booklets A and B: 1 hour 10 minutes

Additional materials: Optical Answer Sheet (OAS)

Name : _____

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- 1 Round 275 893 to the nearest thousand.

- (1) 275 000
(2) 276 000
(3) 280 000
(4) 300 000

$$\begin{array}{r} \downarrow \\ 275 \ 893 \approx 276 \ 000 \end{array}$$

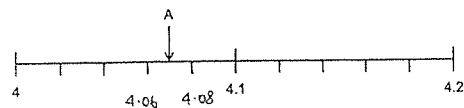
(2)

- 2 In 56.78, which digit is in the tenths place?

- (1) 5
(2) 6
(3) 7
(4) 8

(3)

- 3 The figure below shows a number line. Which of the following is the closest to the reading of A?



- (1) 4.06
(2) 4.07
(3) 4.35
(4) 4.70

$$0.1 \div 5 = 0.02$$

(2)

- 4 Four packages have the following masses:

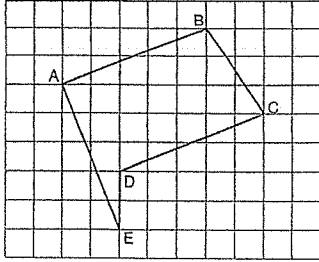
Package	Mass
A	2.05 kg
B	1 kg 95 g
C	2500 g
D	2 kg 9 g

Which of the following shows the packages arranged in order from the lightest to heaviest?

- Lightest Heaviest
- (1) B, D, A, C
(2) B, A, D, C
(3) C, D, A, B
(4) C, A, D, B

(1)

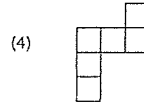
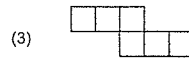
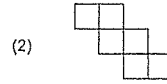
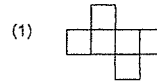
5 Which two lines are perpendicular to each other?



- (1) BC and CD
- (2) AB and DC
- (3) AB and AE
- (4) AE and ED

(3)

6 Which of the following is not a net of a cube?

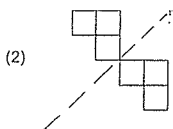
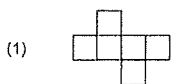


(4)

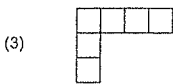
5

6

7 Each figure below is made up of 6 identical squares. Which of the following has a line of symmetry?



(2)



8 A baker sold n cupcakes in the morning. In the afternoon, he sold 3 times as many cupcakes as in the morning. The baker sold 84 cupcakes altogether. How many cupcakes did he sell in the morning?

- (1) 21
- (2) 28
- (3) 42
- (4) 63

$$\text{morning} \rightarrow n$$

$$\text{afternoon} \rightarrow 3n$$

$$3n + n = 4n$$

$$4n = 84$$

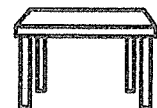
$$n = 84 \div 4$$

$$= 21$$

(1)

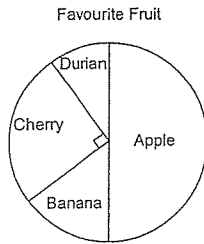
9 Which of the following is likely to be the height of a desk in a classroom?

- (1) 7 cm
- (2) 7 m
- (3) 70 cm
- (4) 70 m



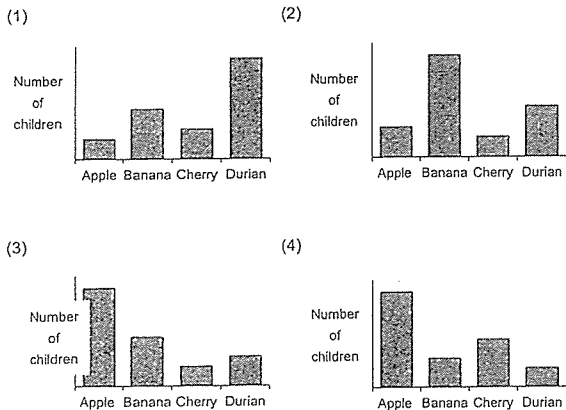
(3)

- 10 A group of children was asked to choose their favourite fruit from apple, banana, cherry and durian. The pie chart below represents the children's choices.



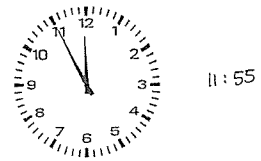
Apple → most
Cherry → half of apple

Which bar graph best represents the information in the pie chart?



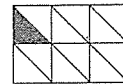
9

- 11 Ranesh's clock showed the time below. His clock was 15 minutes slow. What was the actual time?



- (1) 11:40
(2) 11:55
(3) 12:10
(4) 1:10
- (3)

- 12 The figure below is made up of identical triangles. How many more triangles must be shaded such that $\frac{3}{4}$ of the figure is shaded?



- (1) 8
(2) 2
(3) 3
(4) 9
- (1)

10

- 13 Arrange the following fractions from the greatest to the smallest.

smallest greatest
 $1\frac{2}{3}$, $\frac{8}{5}$, $1\frac{5}{7}$

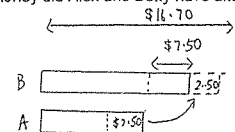
- Greatest Smallest
- (1) $\frac{8}{5}$, $1\frac{5}{7}$, $1\frac{2}{3}$
(2) $1\frac{2}{3}$, $1\frac{5}{7}$, $\frac{8}{5}$
(3) $1\frac{5}{7}$, $\frac{8}{5}$, $1\frac{2}{3}$
(4) $1\frac{5}{7}$, $1\frac{2}{3}$, $\frac{8}{5}$
- (4)

- 14 The total mass of an apple and a papaya is $\frac{9}{10}$ kg. The mass of the apple is $\frac{1}{5}$ kg. Find the difference between the mass of the papaya and the mass of the apple.

- papaya → $\frac{9}{10} - \frac{1}{5}$
 $= \frac{9}{10} - \frac{2}{10}$
 $= \frac{7}{10}$
- Difference → $\frac{7}{10} - \frac{1}{5}$
 $= \frac{7}{10} - \frac{2}{10}$
 $= \frac{5}{10}$
 $= \frac{1}{2}$
- (1)

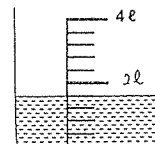
11

- 15 Betty had \$7.50 more than Alex. After Alex gave \$2.50 to Betty, Betty had \$16.70. How much money did Alex and Betty have altogether?



- (1) \$18.40
(2) \$20.90
(3) \$23.40
(4) \$25.90
- (2)

- 16 Find the volume of water in the container below.



- (1) 40 ml
(2) 400 ml
(3) 800 ml
(4) 1600 ml
- (4)

12

- 17 Jia Le saves \$5 of his weekly allowance and spends the rest of it. When he decreases his spending by 20%, his savings increases by 60%. What is Jia Le's weekly allowance?

$$\frac{60}{100} \times 5 = \frac{6}{10} \times \frac{5}{1}$$

$$= \frac{30}{10}$$

$$= 3 \rightarrow \text{increase in saving}$$

- (1) \$6
(2) \$8
(3) \$15
(4) \$20

(14)

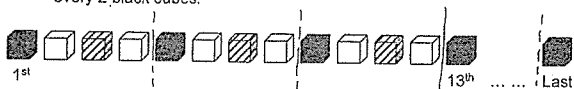
$$20\% \text{ of spending} \rightarrow \$3$$

$$100\% \text{ of spending} \rightarrow \$3 \times 5$$

$$= \$15$$

$$\$15 + \$5 = \$20$$

- 18 David arranged some cubes in a row forming a repeated pattern as shown below. The first cube and the last cube in the row formed were black cubes. There were 2 white cubes and 1 striped cube between every 2 black cubes.



Altogether, there were 18 black cubes in the row formed. What was the total number of white cubes?

$$18 - 1 = 17 \rightarrow \text{number of groups}$$

- (1) 9
(2) 18
(3) 34
(4) 36

$$17 \times 2 = 34$$

(3)

(Go on to Booklet B)

13



NANYANG PRIMARY SCHOOL
PRELIMINARY EXAMINATION
2026

PRIMARY 6

MATHEMATICS
PAPER 1
(BOOKLET B)

Total Time for Booklets A and B: 1 hour 10 minutes

INSTRUCTIONS TO CANDIDATES

- Write your name and index number in the space provided.
- Do not turn over this page until you are told to do so.
- Follow all instructions carefully.
- Answer all questions.
- Write your answers in this booklet.
- The use of calculators is NOT allowed.

Name: _____ ()

Class: Primary 6 ()

Booklet B / 24

4

This booklet consists of 9 printed pages and 3 blank pages.

2

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Questions 19 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. (24 marks)

- 19 Write down all the common multiples of 3 and 4 that are smaller than 30.

3, 6, 9, 12, 15, 18, 21, 24, 27, 30

4, 8, 12, 16, 20, 24, 28

Ans: 12 and 24

- 20 (a) Express $7\frac{19}{20}$ as a decimal.

$$7\frac{19}{20} = 7\frac{95}{100}$$

$$= 7.95$$

Ans: (a) 7.95

- (b) Express $\frac{27}{6}$ as a mixed number in the simplest form.

$$\begin{array}{r} 4 \\ 6 \overline{) 27} \\ \underline{- 24} \\ 3 \end{array}$$

$$\frac{27}{6} = 4\frac{3}{6}$$

$$= 4\frac{1}{2}$$

Ans: (b) $4\frac{1}{2}$

- 21 (a) Find the value of $1.5 \div 30$

$$1.5 \div 3 \div 10$$

$$= 0.5 \div 10$$

$$= 0.05$$

Ans: (a) 0.05 or $\frac{1}{20}$

- (b) Find the value of $95.02 - 5.2$

$$\begin{array}{r} 14 \quad 10 \\ 95.02 \\ - 5.20 \\ \hline 89.82 \end{array}$$

Ans: (b) 89.82

- 22 Bob had a 1070 cm long string. He bought another 3 m of string. What was the total length of his strings? Give your answer in metres.

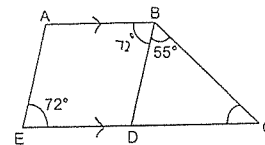
$$1\text{ m} = 100\text{ cm}$$

$$1070\text{ cm} = 10.7\text{ m}$$

$$10.7 + 3 = 13.7 \text{ (ans)}$$

Ans: 13.7 m

- 24 In the figure below, ABDE is a parallelogram and ABCE is a trapezium.



- (a) Find $\angle ABD$.

Ans: (a) 72°

- (b) Find $\angle BCD$.

$$72^\circ + 55^\circ = 127^\circ$$

$$180^\circ - 127^\circ = 53^\circ \text{ (ans)}$$

Ans: (b) 53°

- 23 Ms Mak bought 80 stickers. She used r stickers and gave the remaining stickers equally to 4 friends.

- (a) What was the number of stickers each friend received in terms of r ?

$$\text{Ans: (a)} \quad \left(\frac{80-r}{4}\right)$$

- (b) How many stickers did each friend receive when $r = 24$?

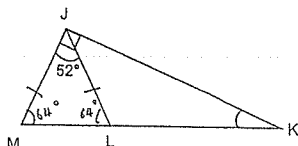
$$80 - 24 = 56$$

$$56 \div 4 = 14 \text{ (ans)}$$

Ans: (b) 14

$$\begin{array}{r} 14 \\ 4 \overline{) 56} \\ \underline{- 4} \\ 16 \\ \underline{- 16} \\ 0 \end{array}$$

- 25 In the figure below, JKM is a right-angled triangle and JL = JM. Find $\angle JKM$.



$$180^\circ - 52^\circ = 128^\circ$$

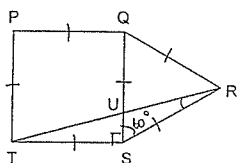
$$128^\circ \div 2 = 64^\circ$$

$$\angle JKM = 180^\circ - 90^\circ - 64^\circ$$

$$= 26^\circ \text{ (ans)}$$

Ans: 26°

- 26 In the figure below, PQST is a square and QRS is an equilateral triangle. TUR is a straight line. Find $\angle TRS$.



$$\angle TSU = 90^\circ$$

$$\angle RSQ = 60^\circ$$

$$\triangle TSR \text{ is an isosceles triangle}$$

$$90^\circ + 60^\circ = 150^\circ \rightarrow \angle TSR$$

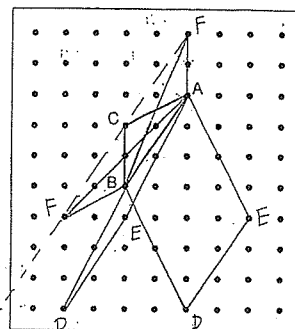
$$180^\circ - 150^\circ = 30^\circ$$

$$30^\circ \div 2 = 15^\circ \text{ (ans)}$$

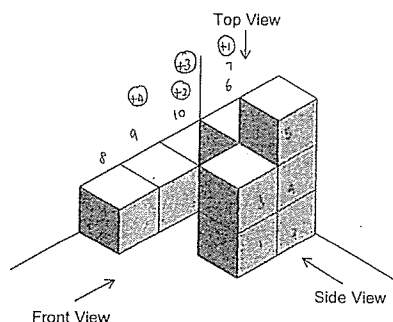
Ans: 15°

- 27 A triangle ABC is drawn on the square grid inside a box below. By joining dots on the grid with straight lines,

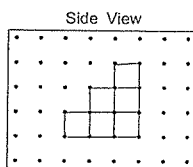
- (a) draw a parallelogram ABDE such that AE is twice as long as AC.
(2 possible solutions)
(b) draw another triangle ABF such that it has the same area as triangle ABC. Triangle ABF must not overlap with parallelogram ABDE.
(2 possible solutions)



- 28 The solid below is made up of 10 unit cubes.



- (a) Draw the side view of the solid on the grid below.



- (b) Find the greatest number of unit cubes that can be added to the solid without changing the side view and top view.

Ans: (b) 4

- 29 At a bakery, cupcakes are sold at the price shown below. Mrs Loh needs 302 cupcakes for her daughter's birthday party. What is the least amount of money she will have to spend?

Buy 6 cupcakes and get 1 more free.



$$\begin{array}{r} 43 \\ 7 \overline{) 302} \\ \underline{-28} \\ 22 \\ \underline{-21} \\ 1 \\ \underline{0} \\ 43 \\ \times 6 \\ \hline 258 \end{array}$$

$$6 + 1 = 7$$

$$302 \div 7 = 43 R1$$

$$6 \times \$1 = \$6$$

$$43 \times \$6 = \$258$$

$$\$258 + \$1 = \$259 \text{ (ans)}$$

Ans: \$ 259

- 30 There was 5 l of water in a bottle. Kiara poured the water in the bottle into as many identical cups as possible. Each cup contained $\frac{3}{5}$ l of water. How much water was left in the bottle?

$$5 \div \frac{3}{5} = \frac{5}{1} \times \frac{5}{3}$$

$$= \frac{25}{3}$$

$$= 8 \frac{1}{3}$$

$$\frac{3}{5} \times \frac{1}{3} = \frac{1}{5} \text{ (ans)}$$

$$\frac{25}{3} - 8 \frac{1}{3} = \frac{1}{5}$$

Ans: $\frac{1}{5}$ l

End of Paper



NANYANG PRIMARY SCHOOL
PRELIMINARY EXAMINATION
2026

PRIMARY 6

MATHEMATICS
PAPER 2

Time: 1 hour 20 minutes

INSTRUCTIONS TO CANDIDATES

1. Write your name and index number in the space provided.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Write your answers in this booklet.
6. The use of an approved calculator is allowed.

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Parent's Signature: _____

Please sign and return the examination paper the next day. Any queries should be raised at the time when the paper is returned.

Booklet A	/ 26
Booklet B	/ 24
Paper 2	/ 50
Total	/ 100

This booklet consists of 18 printed pages and 2 blank pages.

2

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 Colin collected h stamps.
Yvonne collected 15 more stamps than Colin.
The total number of stamps Colin and Yvonne collected was 91.
How many stamps did Colin collect?

$$\begin{aligned}\text{Colin} &\rightarrow h \\ \text{Yvonne} &\rightarrow h+15 \\ h+h+15 &= 91 \\ 2h+15 &= 91 \\ 2h &= 91-15 \\ &= 76 \\ h &= 76 \div 2 \\ &= 38 \text{ (ans)}\end{aligned}$$

Ans: 38

- 2 The average number of stickers bought by a group of 7 students was 14.
One of the students in the group bought 24 stickers.
What was the average number of stickers bought by the other 6 students in the group?

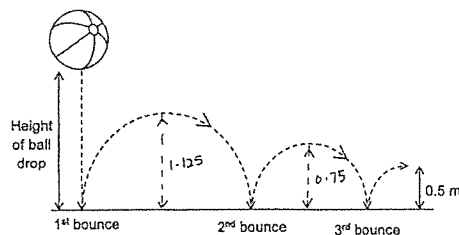
$$\begin{aligned}\text{Total of 7 students} &= 7 \times 14 \\ &= 98\end{aligned}$$

$$\begin{aligned}\text{Total of 6 students} &= 98 - 24 \\ &= 74\end{aligned}$$

$$\begin{aligned}\text{Average of 6 students} &= 74 \div 6 \\ &= 12\frac{1}{3} \text{ (ans)}\end{aligned}$$

Ans: $12\frac{1}{3}$ or $\frac{37}{3}$

- 3 A ball is dropped at a height as shown in the figure below. Every time the ball bounces, the greatest height it reaches is $\frac{2}{3}$ of the greatest height it last reached. On the 3rd bounce, the ball reaches the greatest height of 0.5 m. At what height is the ball dropped? Give your answer in metres and round your answer to 2 decimal places.



$$0.5 \div 2 \times 3 = 0.75$$

$$0.75 \div 2 \times 3 = 1.125$$

$$1.125 \div 2 \times 3 = 1.6875$$

$$\approx 1.69 \text{ (ans)}$$

Ans: 1.69 m

- 4 Ariff paints 3 rooms in 8 days. Ben paints 3 rooms in 4 days. How many days will it take both of them to paint 36 rooms when they work together?

Ariff,

8 days $\rightarrow$ 3 rooms

Ben,

4 days $\rightarrow$ 3 rooms

8 days $\rightarrow 3 \times 2 = 6$ rooms

Together,

8 days $\rightarrow 3+6 = 9$ rooms

$$36 \div 9 = 4$$

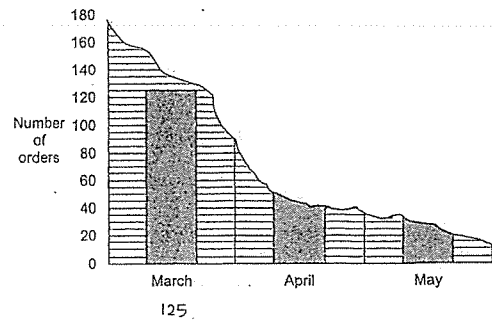
$$8 \times 4 = 32$$

32 days $\rightarrow$ 36 rooms

(ans)

Ans: 32

- 5 The bar graph shows the number of orders a florist received each month from March to May. Part of the bar graph had been torn off.



In April, there was a 52% decrease in the number of orders received compared to March. In May, there was a 200% increase in the number of orders received compared to April. How many orders were received in May?

$$4 \text{ units} = 20$$

$$1 \text{ unit} = 20 \div 4 = 5$$

$$125 \times \frac{52}{100} = 65 \rightarrow \text{decrease}$$

$$125 - 65 = 60 \rightarrow \text{April}$$

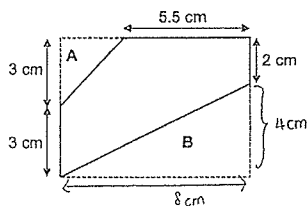
$$60 \times \frac{200}{100} = 120 \rightarrow \text{increase}$$

$$60 + 120 = 180 \text{ (ans)}$$

Ans: 180

For questions 6 to 15, show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. The number of marks available is shown in brackets [] at the end of each question or part-question. (40 marks)

- 6 Triangle A and triangle B were cut from a rectangular piece of paper to form the figure shown below. The area of triangle B is 16 cm^2 . Find the area of triangle A.



$$3+3-2=4$$

$$\frac{1}{2} \times \text{base} \times 4 = 16$$

$$\text{base} \times 4 = 16 \times 2$$

$$= 32$$

$$\text{base} = 32 \div 4$$

$$= 8$$

$$8 - 5.5 = 2.5$$

$$\frac{1}{2} \times 2.5 \times 3 = 3.75 \text{ (ans)}$$

Ans: 3.75 cm^2 [3]

- 7 A student recorded his test scores for 3 subjects in his student diary. He accidentally spilled some orange juice onto his student diary and his scores for the three subjects were smudged.

Score	
English	8
Mathematics	5
Science	5

The average score for Mathematics and Science was 6 more than the average score for English and Science.

- (a) What was his score for Mathematics?

$$6 \times 2 = 12$$

Math is 12 more than English

$$8 + 2 = 10$$

ones place for Math is a zero

Ans: 50 [1]

- (b) The average score for English and Mathematics was 5 more than the average score for the 3 subjects. What was his score for Science?

$$MA \rightarrow 50$$

$$EL \rightarrow 50 - 12$$

$$= 38$$

$$\text{Average of EL \& MA} = \frac{50+38}{2}$$

$$= 44$$

$$\text{Average for 3 subjects} = 44 - 5$$

$$= 39$$

$$\text{Ans: } 29 \text{ [2]}$$

$$\text{Total for 3 subjects} = 39 \times 3 = 117$$

$$\text{Science} = 117 - 50 - 38$$

$$= 29 \text{ (ans)}$$

- 8 Mrs Ang baked a total of 360 cookies and muffins. After she gave away $\frac{4}{7}$ of the muffins and $\frac{5}{8}$ of the cookies, she had a total of 141 cookies and muffins left. How many cookies did Mrs Ang give away?

$$1 - \frac{4}{7} = \frac{3}{7} \quad 1 - \frac{5}{8} = \frac{3}{8}$$

$$\frac{3}{7} \text{ of muffin} + \frac{3}{8} \text{ of cookies} = 141$$

$$\frac{1}{7} \text{ of muffin} + \frac{1}{8} \text{ of cookies} = 141 \div 3 = 47$$

$$\frac{1}{7} \text{ of muffin} + \frac{7}{8} \text{ of cookies} = 47 \times 7 = 329$$

$$\frac{1}{7} \text{ of muffin} + \frac{8}{8} \text{ of cookies} = 360 \rightarrow \text{from question}$$

$$\frac{1}{8} \text{ of cookies} = 360 - 329 = 31$$

$$\frac{5}{8} \text{ of cookies} = 31 \times 5 = 155 \text{ (ans)}$$

Ans: 155 [3]

9

- 9 Tank A is a rectangular tank with a square base. Tank A has a volume of 2592 cm³. The height of tank A is $\frac{3}{2}$ of the length of tank A.

(a) What is the length of tank A?

$$\text{Height} \rightarrow 3 \text{ units}$$

$$\text{length} \rightarrow 2 \text{ units}$$

$$3 \times 2 \times 2 = 12$$

$$12 \text{ unit}^3 = 2592$$

$$1 \text{ unit}^3 = 2592 \div 12$$

$$= 216$$

$$1 \text{ unit} = \sqrt[3]{216}$$

$$= 6$$

$$2 \text{ units} = 6 \times 2$$

$$= 12 \text{ (ans)}$$

Ans: (a) 12 cm [3]

- (b) Tank B is a cubical tank. The length of tank B is twice the length of tank A. Find the volume of tank B.

$$\text{length of B} = 2 \times 12$$

$$= 24$$

$$\text{Volume of B} = 24 \times 24 \times 24$$

$$= 13824 \text{ (ans)}$$

Ans: (b) 13824 cm³ [1]

10

- 10 The ratio of Eli's number of stickers to Devi's number of stickers is 4 : 7. The ratio of Faizal's number of stickers to Eli's number of stickers is 5 : 6.

(a) What fraction of Devi's number of stickers is Faizal's number of stickers?

$$\begin{array}{cc} \downarrow & \downarrow \\ E : D & F : E \\ 4 : 7 & 5 : 6 \\ \hline 12 : 21 & 10 : 12 \end{array}$$

$$\frac{F}{D} \rightarrow \frac{10}{21} \text{ (ans)}$$

Ans: (a) $\frac{10}{21}$ [2]

- (b) The difference between Faizal's number of stickers and Eli's number of stickers is 18. How many stickers does Devi have?

$$12 - 10 = 2$$

$$2 \text{ units} = 18$$

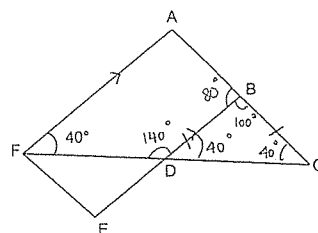
$$1 \text{ unit} = 18 \div 2 = 9$$

$$21 \text{ units} = 9 \times 21 = 189 \text{ (ans)}$$

Ans: (b) 189 [2]

11

- 11 In the figure below, ABDF is a trapezium. AF is parallel to BD. BD = BC. ABC, BDE and CDF are straight lines.



(a) Find $\angle ABD$.

$$\angle FDB = 180^\circ - 40^\circ = 140^\circ$$

$$\angle ABD = 180^\circ - 100^\circ = 80^\circ \text{ (ans)}$$

$$\angle BDC = 180^\circ - 140^\circ = 40^\circ$$

$$= \angle BCD$$

$$\angle BDC = 180^\circ - 40^\circ - 40^\circ = 100^\circ \text{ Ans: (a) } 80^\circ [2]$$

- (b) The figure above is not drawn to scale. Each of the statements below 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
FA is perpendicular to AC.		✓	
ACF is an isosceles triangle.	✓		
ABEF is a parallelogram.			✓

[2]

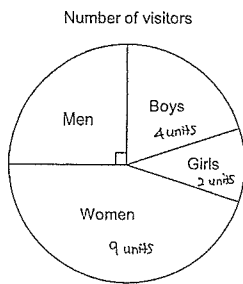
$$\angle FAB = 180^\circ - 80^\circ = 100^\circ$$

$$\angle AFC = \angle ACF = 40^\circ$$

- 12 The pie chart below shows the number of visitors who went to a museum on a Saturday.

The number of children is $\frac{2}{3}$ the number of women.

The number of boys who visited the museum was twice the number of girls.



children $\rightarrow 2 \times 3$
 $= 6$
 women $\rightarrow 3 \times 3$
 $= 9$

- (a) What fraction of the total number of visitors were women?
 Give your answer in the simplest form.

$$4 + 2 + 9 = 15$$

$$\frac{9}{15} \rightarrow \frac{3}{5}$$

$$\frac{1}{4} \rightarrow 15 \div 4 = 3.75$$

$$\frac{4}{4} \rightarrow 5 \times 4 = 20$$

Ans: (a) $\frac{9}{20}$ [2]

- (b) What percentage of the total number of visitors were girls?

$$\frac{2}{20} = \frac{1}{10}$$

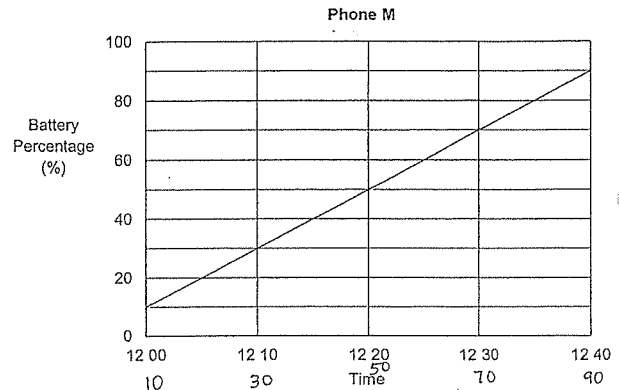
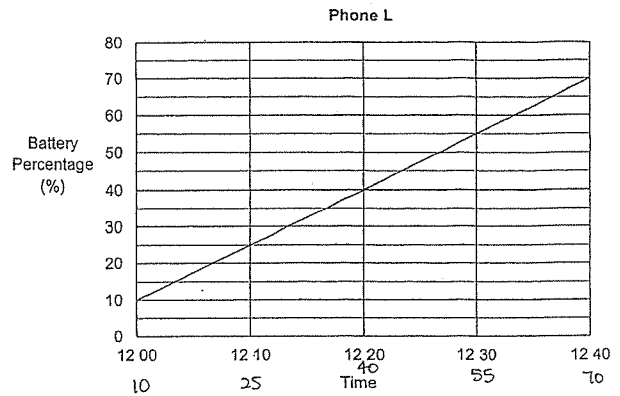
$$= \frac{10}{100}$$

$$= 10\%$$

Ans: (b) 10% [2]

13

- 13 The graphs below show the battery percentage of two mobile phones, Phone L and Phone M, from 12 00 to 12 40. At 12 00, both phones had a battery percentage of 10% and were plugged into two different phone chargers.



14

- (a) At what time did Phone L reach the battery percentage of 40%?

OR 12:20 pm

Ans: (a) 12 20 [1]

- (b) What was the battery percentage of Phone M at 12 30?

Ans: (b) 70% [1]

- (c) Which phone has a higher rate of increase in the battery percentage per minute? Show your working to justify your answer.

Phone L,

$$10 \text{ min} \rightarrow 25 - 10 = 15$$

Phone M,

$$10 \text{ min} \rightarrow 30 - 10 = 20$$

Phone M increases 20% in 10 min while

Phone L increases 15% in 10 min.

Ans: (c) Phone M [2]

- (d) The rate of increase in the battery percentage of Phone L did not change throughout. At what time did Phone L reach the battery percentage of 100%?

Phone L,

$$10 \text{ min} \rightarrow 15$$

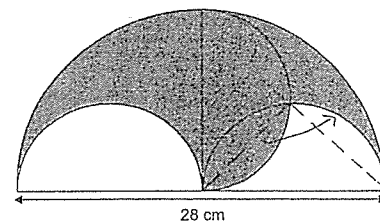
$$100 - 70 = 30$$

Ans: (d) 13 00 [1]

$$20 \text{ min} \rightarrow 15 \times 2 = 30$$

15

- 14 The figure shows a large semicircle and 3 identical small semicircles. The diameter of the large semicircle is 28 cm.



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

- (a) Find the area of the large semicircle.

$$\text{radius} = 28 \div 2 = 14$$

$$\begin{aligned} \text{Area of large semicircle} &= \frac{1}{2} \times \frac{22}{7} \times 14 \times 14 \\ &= 308 \text{ (ans)} \end{aligned}$$

Ans: (a) 308 cm² [2]

(b) Find the area of the shaded part.

$$\text{Radius of small semicircle} = 14 \div 2 \\ = 7$$

$$\text{Area of small semicircle} = \frac{1}{2} \times \frac{22}{7} \times 7 \times 7 \\ = 77$$

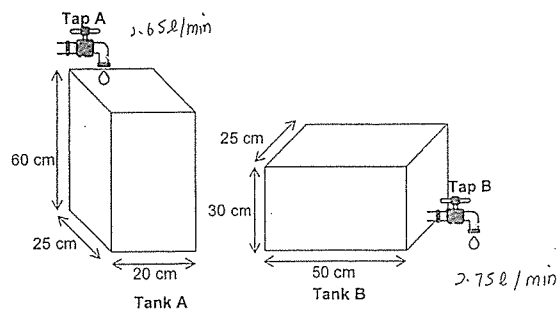
$$\text{Area of triangle} = \frac{1}{2} \times 14 \times 7 \\ = 49$$

$$\text{Area of shaded} = 308 - 77 - 49 \\ = 182 \text{ (ans)}$$

Ans: (b) 182 cm² [3]

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- 15 At first, tank A is empty and tank B is completely filled with water. Water flowed into tank A from tap A at a rate of 2.65 l/min. Water flowed out of tap B at a rate of 2.75 l/min.



- (a) What is the rate of increase in the height of the water level in tank A in cm per minute?

$$1 \text{ min} \rightarrow 2.65 \text{ l} \\ = 2650 \text{ cm}^3$$

$$2650 \div 25 \div 20 = 5.3 \text{ (ans)}$$

Ans: (a) 5.3 cm/min [1]

- (b) What is the rate of decrease in the height of water level in tank B in cm per minute?

$$1 \text{ min} \rightarrow 2.75 \text{ l} \\ = 2750 \text{ cm}^3$$

$$2750 \div 50 \div 25 = 2.2 \text{ (ans)}$$

Ans: (b) 2.2 cm/min [1]

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- (c) Both taps are turned on at the same time. After some time, the height of the water level in tank A was the same as that in tank B. How long does it take for the height of the water level to be the same in both tank A and tank B? Find the height of the water level when it is the same in both tank A and tank B.

$$1 \text{ min} \rightarrow 5.3 + 2.2 \\ = 7.5$$

$$30 \div 7.5 = 4 \text{ min (ans)}$$

$$5.3 \times 4 = 21.2 \text{ (ans)}$$

Ans: (c) Time taken:

4 min

Height of water level:

21.2 cm [3]

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