



NANYANG PRIMARY SCHOOL
END-OF-YEAR EXAMINATION
2023

PRIMARY 5
MATHEMATICS
PAPER 1
(BOOKLET A)

Total Duration for Booklets A and B: 1 hour

Additional materials: Optical Answer Sheet (OAS)

INSTRUCTIONS TO PUPILS

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

Name: _____ ()

Class: Primary 5 ()

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

1 In 5.687, which digit is in the hundredths place?

(1) 5

(2) 6

(3) 7

(4) 8

2 Which of the following is the same as 23 kg 52 g?

(1) 23.025 kg

(2) 23.052 kg

(3) 23.502 kg

(4) 23.520 kg

- 3 Ming Xuan bought 42 oranges, 28 mangoes and 14 kiwis from a fruit store. What was the ratio of the number of oranges to the number of mangoes to the number of kiwis that he bought? Express your answer in its simplest form.

(1) 2 : 3 : 1

(2) 2 : 4 : 6

(3) 3 : 2 : 1

(4) 6 : 4 : 2

- 4 A machine seals 120 fishball packets in 60 seconds. At this rate, how many fishball packets can it seal in 30 minutes?

(1) 3600

(2) 360

(3) 60

(4) 40

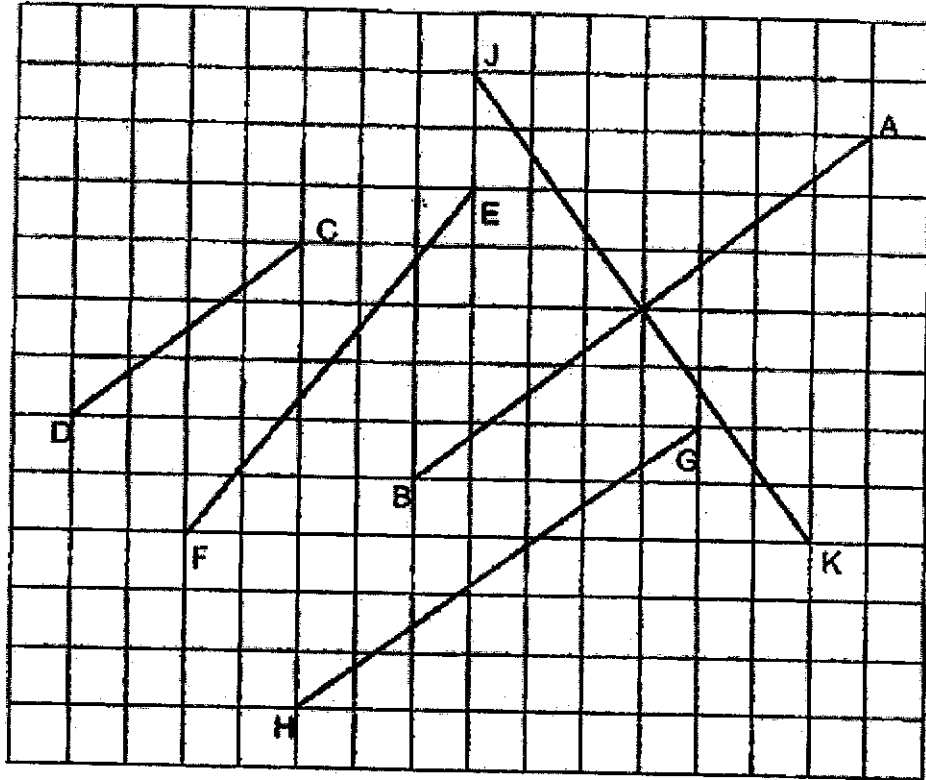
- 5 Arul had 240 stamps. He gave 60 stamps to his sister. What percentage of his stamps did Arul give to his sister?

- (1) 20%
- (2) 25%
- (3) 75%
- (4) 80%

- 6 Thomas had \$1200. He spent 35% of his money on food. How much money did he spend on food?

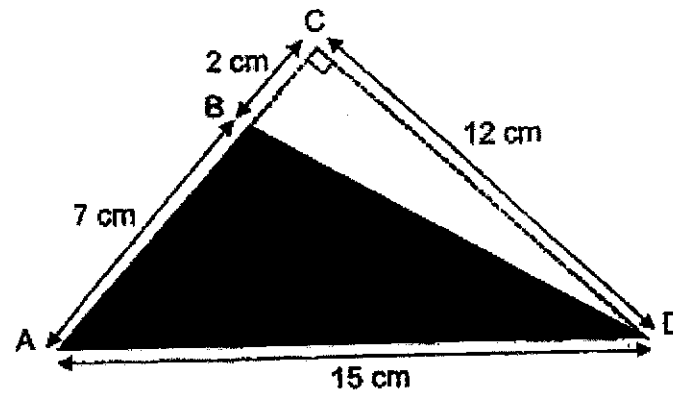
- (1) \$180
- (2) \$360
- (3) \$420
- (4) \$780

- 7 Identify the line parallel to line AB.



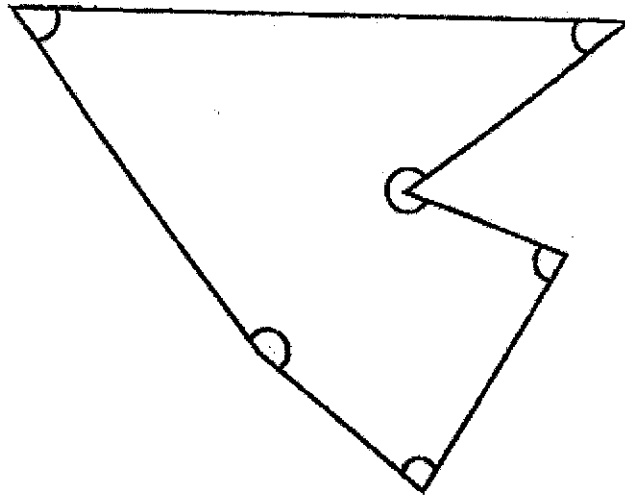
- (1) CD
- (2) EF
- (3) GH
- (4) JK

- 8 Find the area of the shaded triangle ABD.



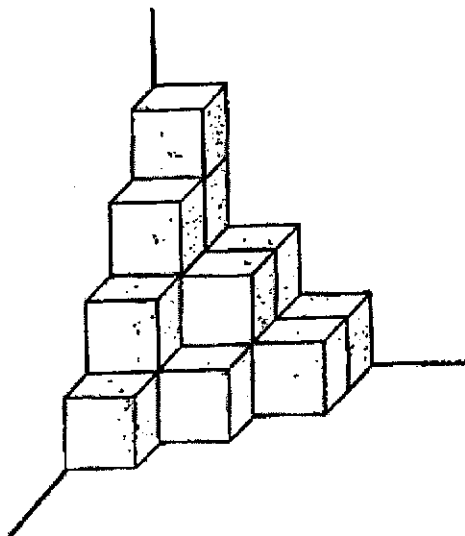
- (1) 42 cm^2
- (2) 52.5 cm^2
- (3) 54 cm^2
- (4) 84 cm^2

- 9 In the figure, how many of the six marked angles are more than 90° ?



- (1) 0
- (2) 2
- (3) 3
- (4) 4

- 10 The figure shows a solid made up of unit cubes. How many unit cubes are needed to make the solid?



- (1) 10
- (2) 12
- (3) 15
- (4) 17

- 11 Arrange the following fractions from the smallest to the largest.

$$\frac{8}{9}, \frac{3}{7}, \frac{4}{5}$$

- | | <u>Smallest</u> | | | <u>Largest</u> | |
|-----|-----------------|---|---------------|----------------|---------------|
| (1) | $\frac{8}{9}$ | , | $\frac{3}{7}$ | , | $\frac{4}{5}$ |
| (2) | $\frac{8}{9}$ | , | $\frac{4}{5}$ | , | $\frac{3}{7}$ |
| (3) | $\frac{3}{7}$ | , | $\frac{4}{5}$ | , | $\frac{8}{9}$ |
| (4) | $\frac{3}{7}$ | , | $\frac{8}{9}$ | , | $\frac{4}{5}$ |

- 12 Find the average of the following 5 numbers.

23

23

18

16

0

- (1) 23
- (2) 20
- (3) 18
- (4) 16
- 13 A factory produces 1505 kg of flour a day. The flour is packed equally into 50 packs. How much does each pack of flour weigh?

- (1) 30.1 kg
- (2) 31 kg
- (3) 300.1 kg
- (4) 301 kg

- 14 At a funfair, there were 270 people. $\frac{2}{3}$ of them were children. $\frac{2}{5}$ of the children were girls and the rest were boys. How many boys were there at the funfair?

- (1) 180
- (2) 162
- (3) 108
- (4) 72

- 15 A chef cooked some soup for 200 guests. Each guest was served 0.78 l of the soup. How much soup did the chef cook?

- (1) 14.6 l
- (2) 15.6 l
- (3) 146 l
- (4) 156 l



NANYANG PRIMARY SCHOOL

**END-OF-YEAR EXAMINATION
2023**

PRIMARY 5

**MATHEMATICS
PAPER 1
(BOOKLET B)**

Total Duration for Booklets A and B: 1 hour

INSTRUCTIONS TO PUPILS

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.
4. Write your answers in this booklet.
5. The use of calculators is **NOT** allowed.

Name: _____ ()

Class: Primary 5 ()

Booklet B

/ 25

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

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)

- 16 Find the value of $198 \div 35 \div 7 - (35 \div 8 \div 4 \times 2)$

Ans: _____

- 17 Find the value of $5 \div 8$. Give your answer as a decimal.

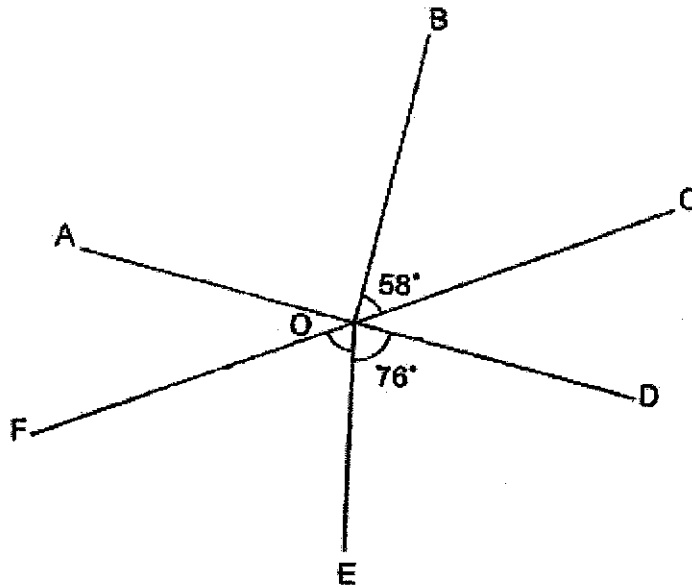
Ans: _____

- 18 What is the missing number in the box?

$$\square : 5 = 24 : 40$$

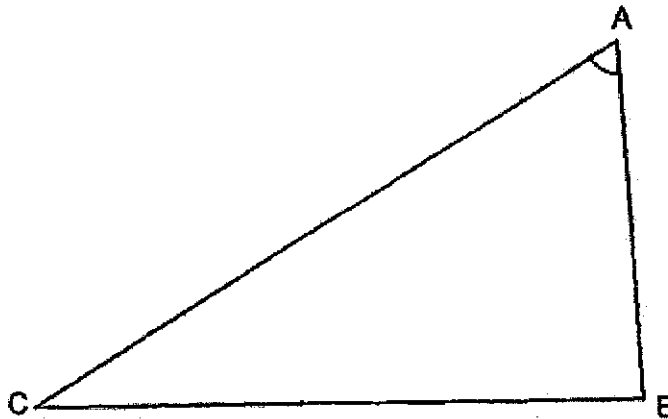
Ans: _____

- 19 In the figure below, AOD and COF are straight lines. $\angle BOC = 58^\circ$, $\angle DOE = 76^\circ$, $\angle AOB = 90^\circ$. Find $\angle FOE$.



Ans: _____°

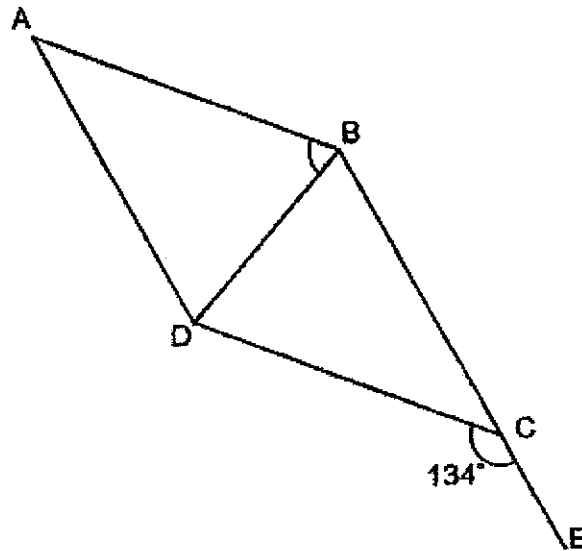
- 20 Measure and write down the size of $\angle BAC$.



Ans: _____°

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

- 21 In the figure below, ABCD is a rhombus. BCE is a straight line and $\angle DCE = 134^\circ$. Find $\angle ABD$.



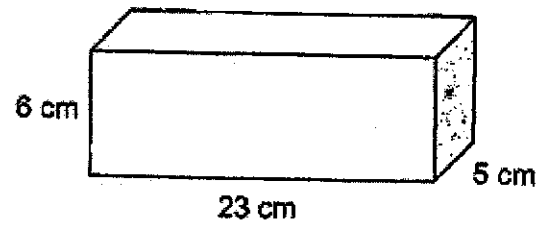
Ans: _____

- 22 Find the value of $\frac{2}{3} \times \frac{5}{8}$

Give your answer as a fraction in the simplest form.

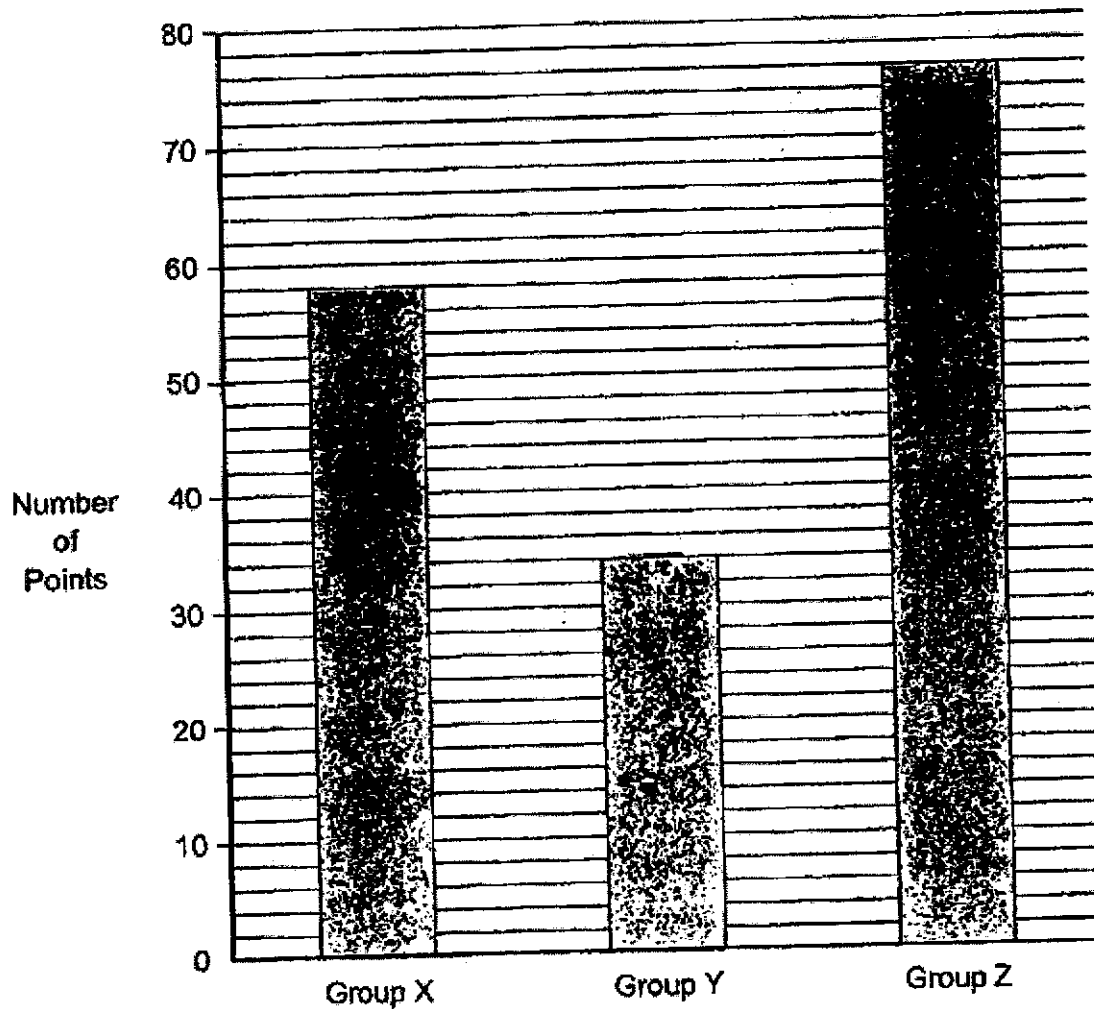
Ans: _____

- 23 What is the volume of the cuboid shown below?



Ans: _____ cm^3

- 24 The bar graph shows the group points scored by 3 groups.
What is the difference in the group points between the highest score and the lowest score?



Ans: _____

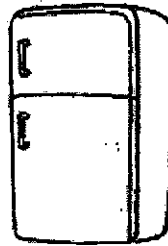
- 25 Sophia paid \$87.40 for 3 identical pencils and 7 identical markers. The price of a marker is \$1.20 more than the price of a pencil. Tim bought 10 such pencils. What was the amount of money he paid for 10 such pencils?

Ans: \$ _____

- 26 The product of 2 numbers is 3069. The smaller number is 9. Find the larger number. Round the answer to the nearest hundred.

Ans: _____

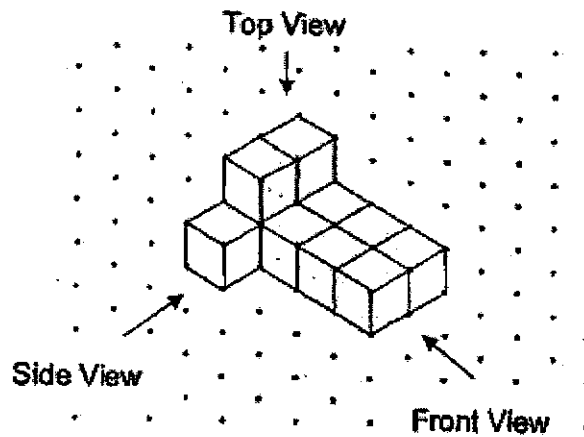
- 27 What is the price of the refrigerator after adding 8% GST?



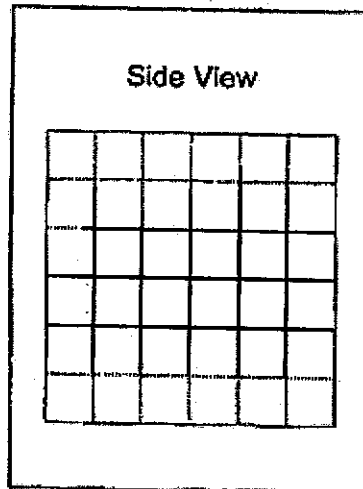
\$2800
(price before GST)

Ans: \$ _____

- 28 The figure shows a solid made up of 11 unit cubes.



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

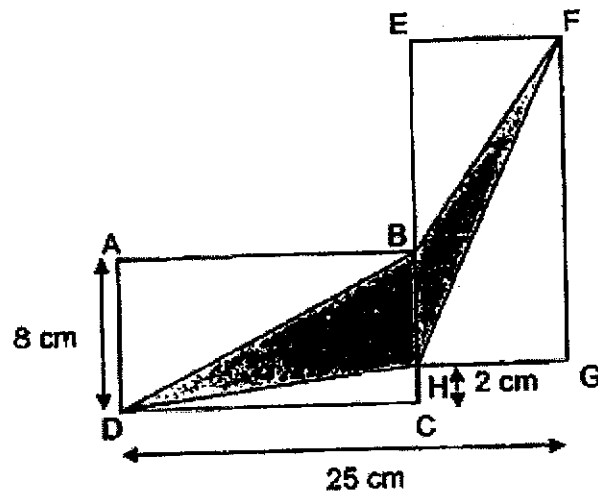


[1]

- (b) Jun Wei painted the whole solid, including the base, green. How many of the 11 unit cubes had exactly three of their faces painted green?

Ans: (b) _____ [1]

- 29 ABCD and EFGH are 2 identical rectangles. Find the total area of the unshaded parts.



Ans: _____ cm^2

- 30 The table below shows the height of 3 boys, Abel, Bernard and Carl. Their heights are in whole numbers. They have an average height of 154 cm. Carl is taller than Bernard and Abel is the shortest. Part of the table is smeared with ink. What is the lowest possible height of Carl?

Name	Height (cm)
Abel	106
Bernard	
Carl	1

Ans: _____ cm

End of Paper



NANYANG PRIMARY SCHOOL

**END-OF-YEAR EXAMINATION
2023**

PRIMARY 5

**MATHEMATICS
PAPER 2**

Duration: 1 hour 30 minutes

INSTRUCTIONS TO PUPILS

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

Name: _____ ()

Class: Primary 5 ()

Parent's Signature: _____

Booklet A	/ 20
Booklet B	/ 25
Paper 2	/ 55
Total	/ 100

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

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 Abdul bought $5\frac{2}{5}$ m of string. He used $1\frac{3}{4}$ m of it to tie a parcel and $\frac{4}{10}$ m of it to decorate a present. How many metres of string had he left? Give your answer as a mixed number.

Ans: _____ m

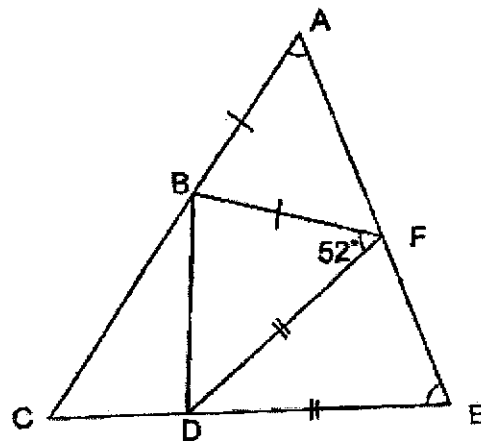
- 2 A jug contains $1\frac{7}{9}$ litres of apple juice. How many litres of apple juice are there in 6 such jugs altogether?

Ans: _____ l

- 3 The average mass of 5 children is 48 kg. When Peter's mass is added, the average mass becomes 45 kg. What is Peter's mass?

Ans: _____ kg

- 4 ACE is a triangle. Triangle ABF and triangle FDE are isosceles triangles. Find the sum of $\angle BAF$ and $\angle FED$.



Ans: _____

- 5 Mei Yan has a piece of yellow ribbon and red ribbon of the same length. She then cuts the piece of yellow ribbon and red ribbon into shorter pieces. If she gives a group of friends a shorter piece of yellow ribbon of length 1.4 m each, she will have 0.6 m of the yellow ribbon left. If she gives the same group of friends a shorter piece of red ribbon of length 1.8 m each, she will need an additional 2.2 m of the red ribbon. How many friends does Mei Yan have in this group?

Ans: _____

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

- 6 The total cost of 2 identical files and 3 identical markers was \$15. The total cost of 5 such files and 6 such markers was \$34.80. What was the cost of 1 such marker?

Ans: _____ [3]

- 7 Team A played against Team B in a badminton match. 560 children watched the badminton match. 70% of the children were boys.

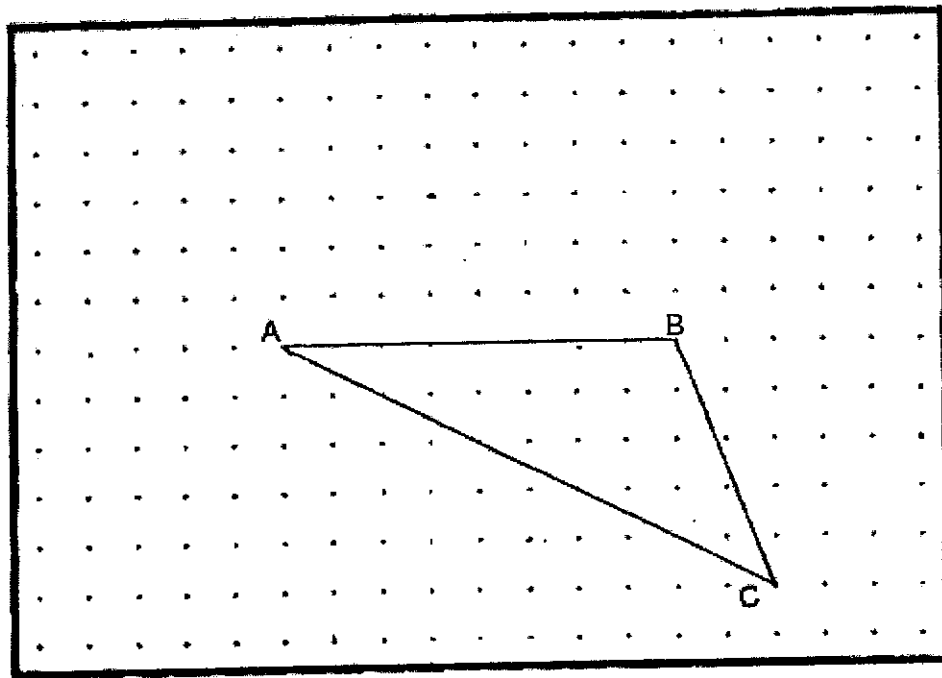
(a) How many girls watched the badminton match?

Ans: (a) _____ [1]

- (b) 42 of the girls supported Team B and the rest of the girls supported Team A. What percentage of the girls supported Team A?

Ans: (b) _____ [2]

- 8 A triangle ABC is drawn on a square grid inside a box.



By joining dots on the grid with straight lines,

- (a) draw a rhombus with BC as one of the sides. The rhombus and triangle ABC must not overlap. [1]
- (b) draw parallelogram ACFG. The length of AB is twice the length of AG. Triangle ABC must not overlap with parallelogram ACFG. [2]

- 9 Jason, Peter and Chris shared a sum of money in the ratio 5 : 9 : 2. The difference between Peter's share and Jason's share is \$128. How much more money did Peter have than Chris?

Ans: _____ [3]

- 10 The average mark for a class of students in a quiz is 74. The top 3 students scored 87, 95 and 100. When the top 3 students were excluded in the calculation for the average, the average mark becomes 62. How many students were there in the class?

Ans: _____ [3]

- 11 Ravi baked 2535 cookies. $\frac{1}{3}$ of them were chocolate cookies, $\frac{3}{5}$ of the remaining cookies were vanilla cookies and the rest were strawberry cookies.

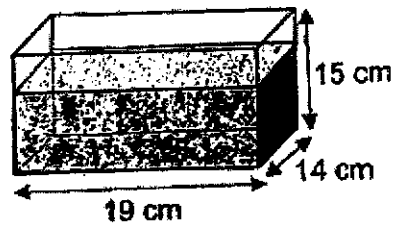
(a) How many vanilla cookies did he bake?

Ans: (a) _____ [2]

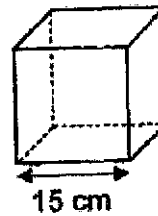
- (b) Ravi packed all the vanilla cookies into large and small tins to sell. He filled each large tin with 30 cookies and each small tin with 12 cookies. All the tins were full and there were no cookies left over. What was the least number of tins used by Ravi?

Ans: (b) _____ [2]

- 12 A rectangular tank measuring 19 cm by 14 cm by 15 cm is $\frac{2}{3}$ filled with water. All the water is then poured into an empty cubical tank with sides measuring 15 cm each.



Rectangular Tank



Cubical Tank

- (a) What is the volume of water in the rectangular tank at first?

Ans: (a) _____ [1]

- (b) How much more water has to be added so that the cubical tank is $\frac{4}{5}$ filled with water? Give your answer in litres.

Ans: (b) _____ [3]

- 13 Keryn and Carol had an equal number of stickers at first. After Keryn used 352 stickers and Carol used 84 stickers, Carol had 5 times as many stickers as Keryn.

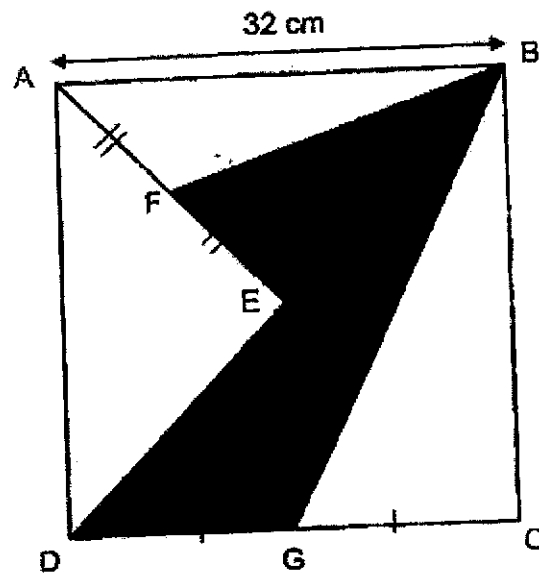
(a) How many stickers did Keryn have left?

Ans: (a) _____ [2]

(b) How many stickers did each girl have at first?

Ans: (b) _____ [2]

- 14 ABCD is a square. $AB = 32$ cm, $DG = GC$ and $AF = FE$ and $DE = EB$.



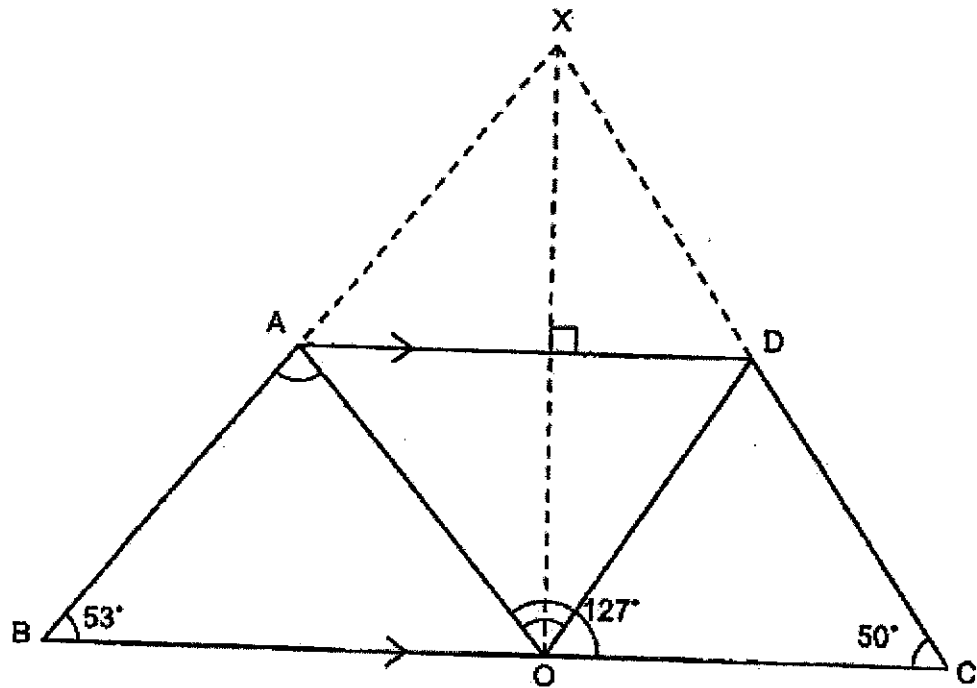
- (a) Find the area of the triangle BDG.

Ans: (a) _____ [1]

- (b) Find the area of the shaded parts.

Ans: (b) _____ [3]

- 15 A piece of triangular paper is folded into a trapezium as shown in the diagram below. $\angle ABO = 53^\circ$, $\angle DCO = 50^\circ$ and $\angle AOC = 127^\circ$.



(a) Find $\angle AOD$.

Ans: (a) _____ [2]

(b) Find $\angle BAO$.

Ans: (b) _____ [2]

- 16 The table shows the parking charges at Value Shopping Mall.

Parking Charges	
9 a.m. to 5 p.m. For the first hour or part thereof	\$1.20
For every additional $\frac{1}{2}$ hour or part thereof	\$1.00
After 5 p.m. till next morning 9 a.m.	\$5.00 per entry

- (a) Mrs Wee parked her car from 9.30 a.m. to 11.45 a.m. How much did she pay for her parking charges?

Ans: (a) _____ [2]

- (b) Mr Ong parked his car from 4.30 p.m. till the next morning 9 a.m. How much did he pay for his parking charges?

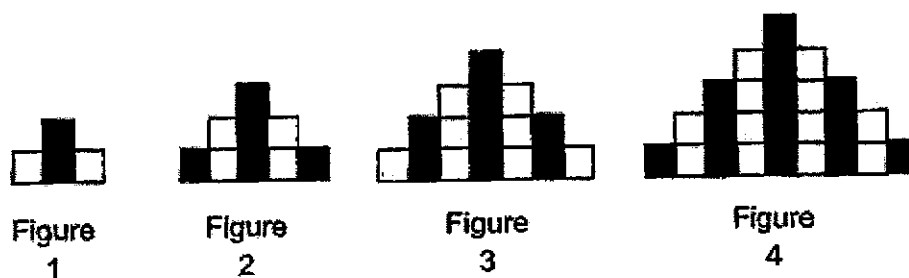
Ans: (b) _____ [1]

- (c) Each of the statement 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
Mr Lim paid \$5 when he parked his car from 6 p.m. till next morning 8.45 a.m.			
Mr Tan paid \$1.20 when he parked his car for 30 minutes.			
Some cars entered at 6 p.m. and exited at 6.50 p.m. on the same day. The parking charges for these cars were \$7.20.			

[2]

- 17 Bryan uses grey and white squares to form figures that follow a pattern as shown below.



- (a) The table shows the number of grey and white squares for the first four figures. Complete the table for Figure 5.

Figure Number	1	2	3	4	5
Number of grey squares	2	5	8	13	
Number of white squares	2	4	8	12	
Total number of squares	4	9	16	25	

[1]


- (b) Find the number of white squares in Figure 8.

Ans: (b) _____ [2]

(c) Find the total number of squares in Figure 49.

Ans: (c) _____ [2]

End of Paper



NANYANG PRIMARY SCHOOL
2023

END-OF-YEAR EXAMINATION

PRIMARY 5
MATHEMATICS
PAPER 1
(BOOKLET A)

Total Question for Booklets A and B: 1 hour

Additional instruction: Optical Answer Sheet (OAS)

INSTRUCTIONS TO CANDIDATE

- Do not turn over this page until you are told to do so.
- Write all instructions carefully.
- Answer all questions.
- Mark your answers in the Optical Answer Sheet (OAS) provided.
- The use of calculators is NOT allowed.

Name: _____ Class (Primary 5): _____

8. And had two amounts. He gave 40% of the money to his mother. What percentage of the money did he give to his father?

$$\frac{60}{240} = \frac{1}{4} = 25\%$$

$$\text{or } \frac{1}{4} \times 100\% = 25\%$$

(2)

9. The area of a square is 1600 cm². The length of its side is 40 cm. What is the perimeter of the square?

$$1600 \rightarrow 40 \times 40$$

$$1600 \rightarrow 40 \times 40 = 1600$$

$$1600 \rightarrow 40 \times 40 = 1600$$

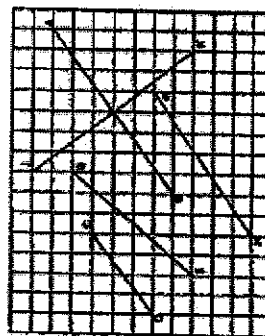
$$1600 \rightarrow 40 \times 40 = 1600$$

$$1600 \rightarrow 40 \times 40 = 1600$$

(2)

- (1) 20
(2) 40
(3) 80
(4) 160

7. Identify the line parallel to line AB.



(1)

- Questions 1 to 10 carry 1 mark each. Questions 11 to 14 carry 2 marks each. For each question, two answers are given. Write the correct answer in the space provided. Write your choice (1, 2, 3) in the right column. (20 marks)

1. In a class, which subject is the most popular?

- (1) English
(2) Math
(3) Science
(4) Art
- (4)

2. Which of the following is the same as 25 kg 50 g?

- (1) 25.05 kg
(2) 25.05 kg
(3) 25.05 kg
(4) 25.05 kg
- (2)

3. John's height is 1.2 m. He is 1.2 m taller than his brother. How much taller is John than his brother? Express your answer in its simplest form.

$$1.2 \text{ m} - 1.2 \text{ m} = 0$$

$$0 \text{ m} = 0$$

(2)

4. A number is 100. It is 100 more than 100. What is the number?

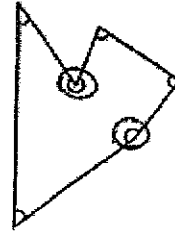
$$100 + 100 = 200$$

$$100 + 100 = 200$$

$$100 + 100 = 200$$

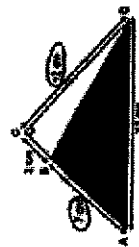
(1)

5. In the figure, the ratio of the shaded region to the unshaded region is 1:2.



- (1) 1
(2) 2
(3) 3
(4) 4
- (2)

6. Find the area of the shaded triangle ABC.



- (1) 4 cm²
(2) 8 cm²
(3) 12 cm²
(4) 16 cm²
- (2)

11. At a market, there were 250 people. $\frac{2}{5}$ of them were adults. $\frac{1}{3}$ of the children were girls and the rest were boys. How many boys were there at the market?



- (1) 100
(2) 102
(3) 104
(4) 106

(2)

12. A child combined some coins for 200 pence. Each coin was worth 1/10 of the total. How much more did he add?

- (1) 14.81
(2) 14.83
(3) 14.85
(4) 14.87

(4)

13. Find the average of the following numbers.

- 25, 20, 15, 10, 5

$$\frac{25+20+15+10+5}{5} = 15$$

- (1) 25
(2) 20
(3) 15
(4) 10

(4)

14. A laptop weighs 1500 kg of iron a day. The shop is making money for 50 pence. How much more iron will it be made?

- (1) 30.1 kg
(2) 30.2 kg
(3) 30.3 kg
(4) 30.4 kg

(1)

15. Arrange the following numbers from the smallest to the largest.

$$\frac{1}{2}, \frac{2}{3}, \frac{3}{4}$$

- (1) $\frac{1}{2} < \frac{2}{3} < \frac{3}{4}$
(2) $\frac{2}{3} < \frac{1}{2} < \frac{3}{4}$
(3) $\frac{3}{4} < \frac{1}{2} < \frac{2}{3}$
(4) $\frac{1}{2} < \frac{3}{4} < \frac{2}{3}$

$$\frac{1}{2} < \frac{2}{3} < \frac{3}{4}$$

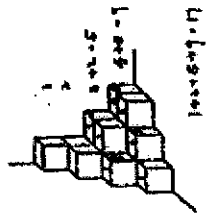
$$\frac{2}{3} < \frac{1}{2} < \frac{3}{4}$$

$$\frac{3}{4} < \frac{1}{2} < \frac{2}{3}$$

(3)

Then $\frac{1}{2} < \frac{2}{3} < \frac{3}{4}$ is the largest.

16. The figure shows a solid made up of unit cubes. How many unit cubes are needed to make the solid?



$$3 \times 3 \times 3 = 27$$

- (1) 10
(2) 18
(3) 26
(4) 27

(4)

17. Find the value of x .

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 unit required.

$$\begin{aligned} 10. \text{ Find the value of } x: 2x + 3 &= 7 - (4x + 2.5) \\ &= 7 - 4x - 2.5 \\ &= 4.5 - 4x \\ &= 4.5 - 4x \\ &= 4.5 - 4x \\ &= 4.5 - 4x \end{aligned}$$

- (1) 1.5
(2) 1.6
(3) 1.7
(4) 1.8

(1)

$$\frac{x}{2} = \frac{2.5}{2} = 1.25$$

or $0.5x = 1.25$

- (1) 1.5
(2) 1.6
(3) 1.7
(4) 1.8

(1)

$$x = 1.5$$

or $0.5x = 1.25$

or $0.5x = 1.25$

or $0.5x = 1.25$

18. In the figure below, AOB and COD are straight lines. Find $\angle AOC$.



- (1) 100
(2) 120
(3) 130
(4) 140

(1)

or $100 + 120 = 220$

or $100 + 120 = 220$

or $100 + 120 = 220$

or $100 + 120 = 220$

or $100 + 120 = 220$

or $100 + 120 = 220$

or $100 + 120 = 220$

or $100 + 120 = 220$

or $100 + 120 = 220$

or $100 + 120 = 220$

or $100 + 120 = 220$

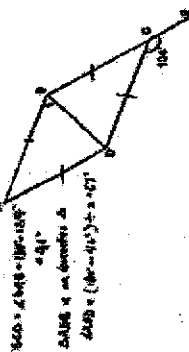
or $100 + 120 = 220$

or $100 + 120 = 220$

or $100 + 120 = 220$

Questions 21 to 24 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 shown.

21 In the figure below, $ABCD$ is a rhombus and E is a point on AD .



Ans: 7

22 Find the value of $\frac{a}{b}$.

Give your answer as a fraction in its simplest form.

$$\frac{1}{2} \times \frac{a}{b} = \frac{1}{4}$$

Ans: $\frac{1}{2}$

23 Find the area of the rectangle with length 10 cm and width 5 cm.



Area = 50

24 Find the area of the rectangle with length 10 cm and width 5 cm.

Area = 50

25 Find the area of the rectangle with length 10 cm and width 5 cm.

Area = 50

26 Find the area of the rectangle with length 10 cm and width 5 cm.

Area = 50

27 Find the area of the rectangle with length 10 cm and width 5 cm.

Area = 50

28 Find the area of the rectangle with length 10 cm and width 5 cm.

Area = 50

29 Find the area of the rectangle with length 10 cm and width 5 cm.

Area = 50

30 Find the area of the rectangle with length 10 cm and width 5 cm.

Area = 50

31 Find the area of the rectangle with length 10 cm and width 5 cm.

Area = 50

32 Find the area of the rectangle with length 10 cm and width 5 cm.

Area = 50

33 Find the area of the rectangle with length 10 cm and width 5 cm.

Area = 50

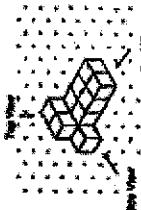
24 Find the area of the rectangle with length 10 cm and width 5 cm.



Area = 50

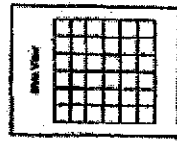
Ans: 50

25 Find the area of the rectangle with length 10 cm and width 5 cm.



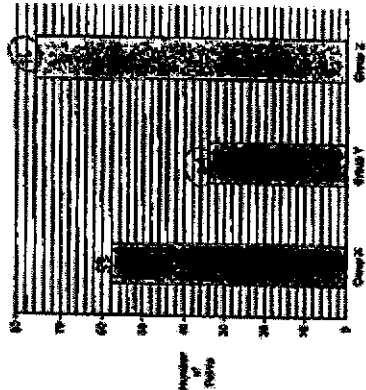
Area = 50

26 Find the area of the rectangle with length 10 cm and width 5 cm.



Ans: 50

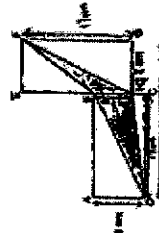
24 Find the area of the rectangle with length 10 cm and width 5 cm.



$$76 - 34 = 42$$

Ans: 42

25 Find the area of the rectangle with length 10 cm and width 5 cm.



Area = 50

26 Find the area of the rectangle with length 10 cm and width 5 cm.

Area = 50

27 Find the area of the rectangle with length 10 cm and width 5 cm.

Area = 50

Ans: 50

25 Find the area of the rectangle with length 10 cm and width 5 cm.



$$42 \times 7 = 294$$

Ans: 294

26 Find the area of the rectangle with length 10 cm and width 5 cm.

$$42 \times 7 = 294$$

$$294 \div 7 = 42$$

Ans: 42

27 Find the area of the rectangle with length 10 cm and width 5 cm.

Age Group	Number of People
0-10	10
11-20	20
21-30	30
31-40	40
41-50	50
51-60	60
61-70	70
71-80	80
81-90	90
91-100	100

Area of height = 100

Area of width = 10

Area of height = 100

Area of width = 10

Area of height = 100

Area of width = 10

Area of height = 100

Area of width = 10

Area of height = 100

Area of width = 10

Area of height = 100

Area of width = 10

Area of height = 100

Area of width = 10

Area of height = 100

Area of width = 10

Area of height = 100

Area of width = 10

Area of height = 100

Area of width = 10

Area of height = 100



SINGAPORE PRIMARY SCHOOL
END-OF-YEAR EXAMINATION
2023

PRIMARY 6
MATHEMATICS
PAPER 2

Duration: 1 hour 40 minutes

INSTRUCTIONS TO PUPILS

- Do not turn over this page until you are told to do so.
- Follow all instructions carefully.
- Answer all questions.
- Write your answers in the boxes provided.
- The use of an approved calculator is allowed.

Name: _____

Class/Primary: _____

Parent's Signature: _____

Booklet A	/ 25
Booklet B	/ 25
Paper 2	/ 40
Total	/ 90

Please show and retain the examination paper for the next 60 days. Any question should be raised at the end of the sixth days when returning paper.

1. Mei Fen has a piece of paper which is 10 cm long and 8 cm wide. She folds the paper along the midline to form a rectangle. She then folds the rectangle along the midline to form a smaller rectangle. What is the perimeter of the smaller rectangle?

$$10 \div 2 = 5$$

$$8 \div 2 = 4$$

$$2 \times (5 + 4) = 18$$

Ans: 18

2. The table below shows the number of books sold by a bookstore in the first 4 months of the year. The number of books sold in the 5th month is 120. Find the total number of books sold in the first 5 months of the year.

Month	1	2	3	4	5
Books sold	150	180	200	160	120

$$150 + 180 + 200 + 160 + 120 = 810$$

Ans: 810

3. A rectangular piece of paper is folded to form a right-angled triangle. The length of the hypotenuse is 10 cm. Find the perimeter of the original piece of paper.

4. A rectangular piece of paper is folded to form a right-angled triangle. The length of the hypotenuse is 10 cm. Find the perimeter of the original piece of paper.

$$10 \div 2 = 5$$

$$10 \div 2 = 5$$

$$2 \times (5 + 5) = 20$$

Ans: 20

5. A rectangular piece of paper is folded to form a right-angled triangle. The length of the hypotenuse is 10 cm. Find the perimeter of the original piece of paper.

$$10 \div 2 = 5$$

$$10 \div 2 = 5$$

$$2 \times (5 + 5) = 20$$

Ans: 20

6. A rectangular piece of paper is folded to form a right-angled triangle. The length of the hypotenuse is 10 cm. Find the perimeter of the original piece of paper.

$$10 \div 2 = 5$$

$$10 \div 2 = 5$$

$$2 \times (5 + 5) = 20$$

Ans: 20

7. A rectangular piece of paper is folded to form a right-angled triangle. The length of the hypotenuse is 10 cm. Find the perimeter of the original piece of paper.

$$10 \div 2 = 5$$

$$10 \div 2 = 5$$

$$2 \times (5 + 5) = 20$$

Ans: 20

8. A rectangular piece of paper is folded to form a right-angled triangle. The length of the hypotenuse is 10 cm. Find the perimeter of the original piece of paper.

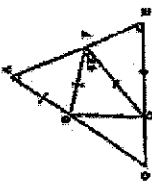
$$10 \div 2 = 5$$

$$10 \div 2 = 5$$

$$2 \times (5 + 5) = 20$$

Ans: 20

9. A rectangular piece of paper is folded to form a right-angled triangle. The length of the hypotenuse is 10 cm. Find the perimeter of the original piece of paper.



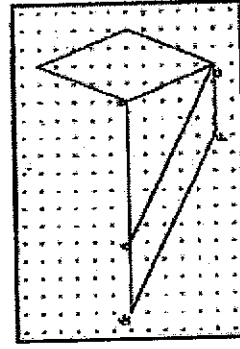
$$\angle AEB = \angle CED$$

$$\angle BAE = \angle DCE$$

$$\angle ABE = \angle CDE$$

Ans: 20

10. A rectangular piece of paper is folded to form a right-angled triangle. The length of the hypotenuse is 10 cm. Find the perimeter of the original piece of paper.



11. A rectangular piece of paper is folded to form a right-angled triangle. The length of the hypotenuse is 10 cm. Find the perimeter of the original piece of paper.

Ans: 20

16. John, Peter and Chris attended a sports meeting in the year 2015. The following table shows the number of medals they won in 2015. How much more medals did John have than Chris?

John	Peter	Chris
5	9	2
4	4	3
1	4	4
7	4	7
7	4	4

Ans: 6

17. John and Chris had an equal number of medals in 2015. How many more medals did Chris have in 2016 than John?

John	Chris
10	15
12	18
14	20
16	22

$10 \rightarrow 12, 14, 16$
 $15 \rightarrow 18, 20, 22$

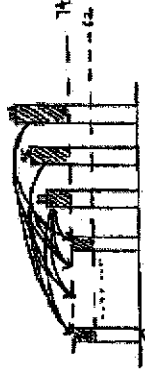
Ans: 7

18. How many athletes did John and Chris have in 2016?

$12 + 18 = 30$

Ans: 30

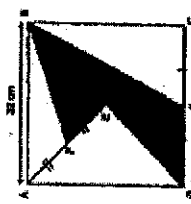
19. The average mark for a class of children in a test is 74. The top 3 students scored 87, 88 and 89. What is the average mark for the rest of the children in the class?



Sum of top 3 marks = $87 + 88 + 89 = 264$
 Sum of all marks = $74 \times 10 = 740$
 Sum of marks of rest = $740 - 264 = 476$
 Average mark of rest = $476 \div 7 = 68$

Ans: 68

20. ABCD is a square. AD = 10 cm. DE = 4 cm and AE = 6 cm. Find the area of the triangle ADE.



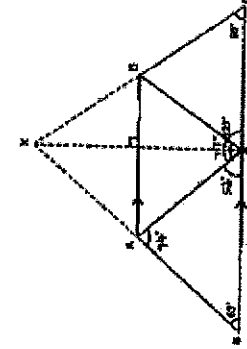
Find the area of the triangle ADE.

$AD = 10$
 $DE = 4$
 $AE = 6$
 Area of $\triangle ADE = \frac{1}{2} \times AD \times DE = \frac{1}{2} \times 10 \times 4 = 20$

Ans: 20

21. Find the area of the shaded part.

22. A piece of irregular paper is folded into 4 equal parts as shown in the diagram below. $\angle AOB = 120^\circ$, $\angle BOC = 100^\circ$ and $\angle COD = 120^\circ$.



Find $\angle AOD$.

$\angle AOD = 360^\circ - (\angle AOB + \angle BOC + \angle COD)$
 $\angle AOD = 360^\circ - (120^\circ + 100^\circ + 120^\circ)$
 $\angle AOD = 360^\circ - 340^\circ = 20^\circ$

Ans: 20

23. Find the area of the shaded part.

24. A rectangular tank measuring 80 cm by 40 cm by 10 cm is $\frac{3}{4}$ full of water. All the water is poured into a cylindrical tank with a diameter of 10 cm.



- (a) What is the volume of water in the rectangular tank?

Volume of water = $\frac{3}{4} \times 80 \times 40 \times 10 = 24000$ cm³

- (b) How much more water has to be added so that the cylindrical tank is full with water? Give your answer in dm³.

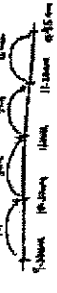
Volume of cylindrical tank = $\pi r^2 h$
 $= \pi \times 5^2 \times 10 = 785$ cm³
 Water to be added = $24000 - 785 = 23215$ cm³
 $= 23.215$ dm³

Ans: 23.215

25. The table shows the parking charges at a car park.

Parking Charge	Rate
First 2 hours	£1.50
Next 2 hours	£1.00
Next 2 hours	£1.00
Next 2 hours	£1.00

- (a) How much parking charge for 8 hours? Give your answer in pounds.



Charge for 8 hours = $1.50 + 1.00 + 1.00 + 1.00 = 4.50$ pounds

Ans: 4.50

- (b) Mr. Lee parked his car for 4.50 hours. He paid the parking charge of £1.50. How much more parking charge did he have to pay?



Charge for 4.50 hours = $1.50 + 1.00 = 2.50$ pounds

Ans: 2.50

10) Find the total number of squares in Figure 10.

$$6 \times 6 = 36$$

$$36 + 1 \times 1 = 37$$

Area of Figure 10	37
Area of Figure 11	45
Area of Figure 12	55

11) Draw total area and initial squares in Figure 11 and Figure 12. Show a pattern in Figure 11.



12) The table shows the number of gray and white squares for the first four figures. Complete the table for Figures 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

Figure	Gray Squares	White Squares	Total Squares
1	1	1	2
2	4	1	5
3	9	1	10
4	16	1	17
5	25	1	26
6	36	1	37
7	49	1	50
8	64	1	65
9	81	1	82
10	100	1	101
11	121	1	122
12	144	1	145
13	169	1	170
14	196	1	197
15	225	1	226
16	256	1	257
17	289	1	290
18	324	1	325
19	361	1	362
20	400	1	401
21	441	1	442
22	484	1	485
23	529	1	530
24	576	1	577
25	625	1	626
26	676	1	677
27	729	1	730
28	784	1	785
29	841	1	842
30	900	1	901
31	961	1	962
32	1024	1	1025
33	1089	1	1090
34	1156	1	1157
35	1225	1	1226
36	1296	1	1297
37	1369	1	1370
38	1444	1	1445
39	1521	1	1522
40	1600	1	1601
41	1681	1	1682
42	1764	1	1765
43	1849	1	1850
44	1936	1	1937
45	2025	1	2026
46	2116	1	2117
47	2209	1	2210
48	2304	1	2305
49	2401	1	2402
50	2500	1	2501
51	2601	1	2602
52	2704	1	2705
53	2809	1	2810
54	2916	1	2917
55	3025	1	3026
56	3136	1	3137
57	3249	1	3250
58	3364	1	3365
59	3481	1	3482
60	3600	1	3601
61	3721	1	3722
62	3844	1	3845
63	3969	1	3970
64	4096	1	4097
65	4225	1	4226
66	4356	1	4357
67	4489	1	4490
68	4624	1	4625
69	4761	1	4762
70	4900	1	4901
71	5041	1	5042
72	5184	1	5185
73	5329	1	5330
74	5476	1	5477
75	5625	1	5626
76	5776	1	5777
77	5929	1	5930
78	6084	1	6085
79	6241	1	6242
80	6400	1	6401
81	6561	1	6562
82	6724	1	6725
83	6889	1	6890
84	7056	1	7057
85	7225	1	7226
86	7396	1	7397
87	7569	1	7570
88	7744	1	7745
89	7921	1	7922
90	8100	1	8101
91	8281	1	8282
92	8464	1	8465
93	8649	1	8650
94	8836	1	8837
95	9025	1	9026
96	9216	1	9217
97	9409	1	9410
98	9604	1	9605
99	9801	1	9802
100	10000	1	10001

13) Find the number of white squares in Figure 11.

$$4 \times 4 = 16$$

$$16 - 1 = 15$$

$$15 - 1 = 14$$

$$14 - 1 = 13$$

$$13 - 1 = 12$$

$$12 - 1 = 11$$

$$11 - 1 = 10$$

$$10 - 1 = 9$$

$$9 - 1 = 8$$

$$8 - 1 = 7$$

$$7 - 1 = 6$$

$$6 - 1 = 5$$

$$5 - 1 = 4$$

$$4 - 1 = 3$$

$$3 - 1 = 2$$

$$2 - 1 = 1$$

$$1 - 1 = 0$$

Area of Figure 11

14) Each of the following figures is made of small squares. Find the number of small squares in each figure. The small squares are 1 unit by 1 unit.

Figure	Area	Perimeter	Number of Small Squares
Figure 1	4	10	4
Figure 2	9	14	9
Figure 3	16	18	16
Figure 4	25	22	25
Figure 5	36	26	36
Figure 6	49	30	49
Figure 7	64	34	64
Figure 8	81	38	81
Figure 9	100	42	100
Figure 10	121	46	121
Figure 11	144	50	144
Figure 12	169	54	169
Figure 13	196	58	196
Figure 14	225	62	225
Figure 15	256	66	256
Figure 16	289	70	289
Figure 17	324	74	324
Figure 18	361	78	361
Figure 19	400	82	400
Figure 20	441	86	441
Figure 21	484	90	484
Figure 22	529	94	529
Figure 23	576	98	576
Figure 24	625	102	625
Figure 25	676	106	676
Figure 26	729	110	729
Figure 27	784	114	784
Figure 28	841	118	841
Figure 29	900	122	900
Figure 30	961	126	961
Figure 31	1024	130	1024
Figure 32	1089	134	1089
Figure 33	1156	138	1156
Figure 34	1225	142	1225
Figure 35	1296	146	1296
Figure 36	1369	150	1369
Figure 37	1444	154	1444
Figure 38	1521	158	1521
Figure 39	1600	162	1600
Figure 40	1681	166	1681
Figure 41	1764	170	1764
Figure 42	1849	174	1849
Figure 43	1936	178	1936
Figure 44	2025	182	2025
Figure 45	2116	186	2116
Figure 46	2209	190	2209
Figure 47	2304	194	2304
Figure 48	2401	198	2401
Figure 49	2500	202	2500
Figure 50	2601	206	2601
Figure 51	2704	210	2704
Figure 52	2809	214	2809
Figure 53	2916	218	2916
Figure 54	3025	222	3025
Figure 55	3136	226	3136
Figure 56	3249	230	3249
Figure 57	3364	234	3364
Figure 58	3481	238	3481
Figure 59	3600	242	3600
Figure 60	3721	246	3721
Figure 61	3844	250	3844
Figure 62	3969	254	3969
Figure 63	4096	258	4096
Figure 64	4225	262	4225
Figure 65	4356	266	4356
Figure 66	4489	270	4489
Figure 67	4624	274	4624
Figure 68	4761	278	4761
Figure 69	4900	282	4900
Figure 70	5041	286	5041
Figure 71	5184	290	5184
Figure 72	5329	294	5329
Figure 73	5476	298	5476
Figure 74	5625	302	5625
Figure 75	5776	306	5776
Figure 76	5929	310	5929
Figure 77	6084	314	6084
Figure 78	6241	318	6241
Figure 79	6400	322	6400
Figure 80	6561	326	6561
Figure 81	6724	330	6724
Figure 82	6889	334	6889
Figure 83	7056	338	7056
Figure 84	7225	342	7225
Figure 85	7396	346	7396
Figure 86	7569	350	7569
Figure 87	7744	354	7744
Figure 88	7921	358	7921
Figure 89	8100	362	8100
Figure 90	8281	366	8281
Figure 91	8464	370	8464
Figure 92	8649	374	8649
Figure 93	8836	378	8836
Figure 94	9025	382	9025
Figure 95	9216	386	9216
Figure 96	9409	390	9409
Figure 97	9604	394	9604
Figure 98	9801	398	9801
Figure 99	10000	402	10000
Figure 100	10201	406	10201