NANYANG PRIMARY SCHOOL

TERM 1 WEIGHTED ASSESSMENT
2023

PRIMARY 6

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 6 (   )

67

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 Janice is $\frac{5}{7}$ as tall as Xiao Ming. What is the ratio of Xiao Ming's height to Janice's height?

(1) 5 : 7

(2) 7 : 5

(3) 5 : 12

(4) 7 : 12

2 A pail contains 28 ℓ of water. A tank contains 800 times as much water as the pail. How many litres of water are there in the tank?

(1) 16 400 ℓ

(2) 22 400 ℓ

(3) 64 400 ℓ

(4) 224 000 ℓ

1

69

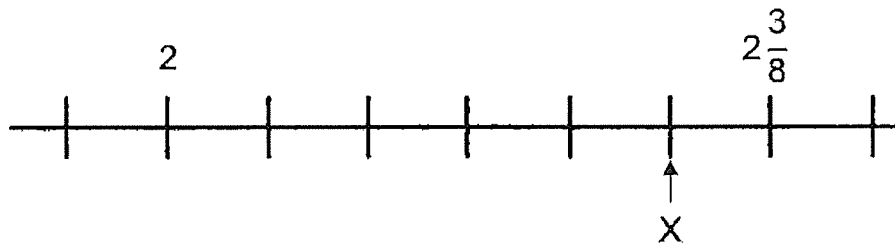**3** What is the value of $\frac{2}{3} + \frac{1}{5}$?

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

(2) $\frac{3}{15}$

(3) $\frac{2}{15}$

(4) $\frac{13}{15}$

4 In the number line below, what is the value of X ?

(1) $2\frac{1}{4}$

(2) $2\frac{3}{15}$

(3) $2\frac{5}{16}$

(4) $2\frac{1}{2}$

5 What is the value of $\dfrac{3}{7} \times \dfrac{5}{2}$?

(1) $\dfrac{8}{9}$

(2) $\dfrac{15}{14}$

(3) $\dfrac{15}{9}$

(4) $\dfrac{6}{35}$

6 $\dfrac{3}{4}$ of a pizza was shared equally among 5 people. What fraction of the pizza did each person receive?

(1) $\dfrac{3}{20}$

(2) $\dfrac{4}{15}$

(3) $\dfrac{20}{3}$

(4) $\dfrac{7}{45}$

7   Express 10.01 kg in kilograms and grams.

(1)   1 kg 1 g
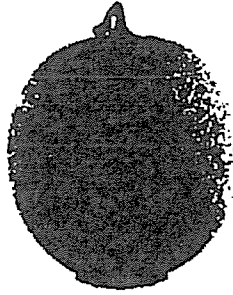
(2)   10 kg 1 g

(3)   10 kg 10 g

(4)   100 kg 10 g

8   Ninety identical pencils cost $57.60. What is the cost of one such pencil?

(1) $0.54

(2) $0.64

(3) $0.74

(4) $6.40

9   Sathya had 250 fruits. 50 of them were papayas, 110 of them were mangoes and the rest were pears. What percentage of her fruits were pears?

(1)   20%

(2)   36%

(3)   44%

(4)   64%

4

10 Which one of the following is likely to be the mass of a honeydew sold in a supermarket?

(1)   2.5 g

(2)   25 g

(3)   2.5 kg

(4)   250 kg

11 The length, breadth and height of a box are in the ratio 3 : 2 : 1 respectively. The length of the box is 6 cm. Find the volume of the box.

(1)   12 cm³

(2)   18 cm³

(3)   36 cm³

(4)   48 cm³

5

12 The solid below is made up of 1-cm cubes. How many more 1-cm cubes must be added to the solid to make it a cuboid measuring 4 cm by 3 cm by 4 cm?
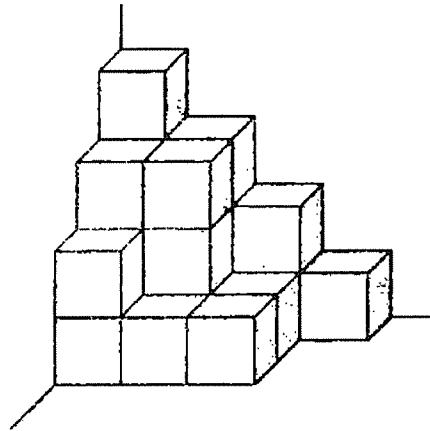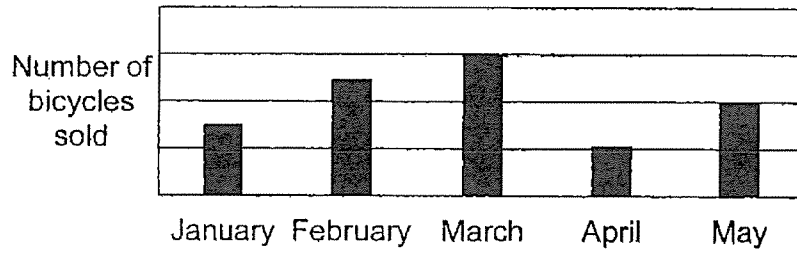

(1) 27

(2) 28

(3) 29

(4) 30

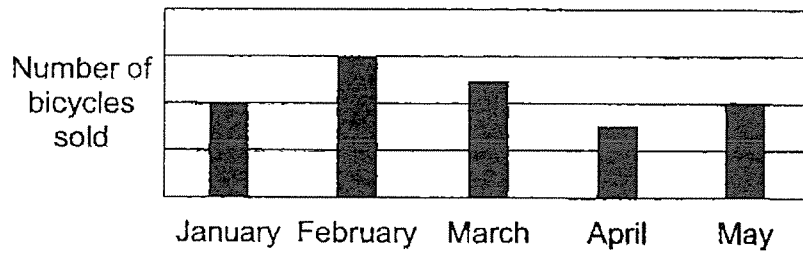**13** The table below shows the number of bicycles sold each month by a shop.

Month	Number of bicycles sold
January	53
February	150
March	124
April	76
May	99

Which of the following bar graphs best represents the information shown in the table?

(1)

January February March April May

(2)

January February March April May

(3)

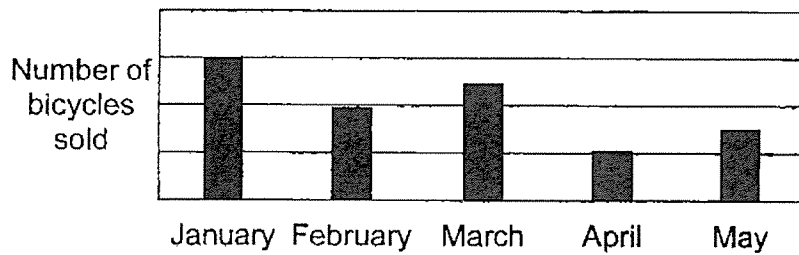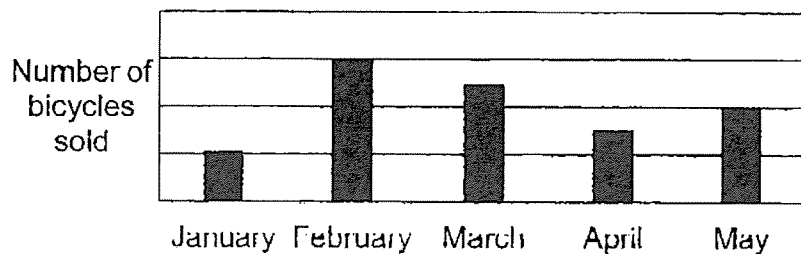January February March April May

(4)

January February March April May

14 Sally had some apples. $\dfrac{3}{5}$ of the apples were red. She then gave $\dfrac{1}{2}$ of the red apples to her sister. What fraction of Sally's apples were given to her sister?

(1) $\dfrac{1}{5}$

(2) $\dfrac{5}{6}$

(3) $\dfrac{1}{10}$

(4) $\dfrac{3}{10}$

15 The first 15 numbers of a number pattern are given below.

$$9 , 0 , 8 , 6 , 9 , 0 , 8 , 6 , 9 , 0 , 8 , 6 , 9 , 0 , 8 , ...$$
1st   15th

What is the 274th number?

(1) 0

(2) 6

(3) 8

(4) 9

NANYANG PRIMARY SCHOOL

TERM 1 WEIGHTED ASSESSMENT 2023

PRIMARY 6

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 6 (   )

Booklet B	/ 25

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 $72 \div 8 - 2 \times 3 + 77$.

Ans: _____

---

17 The breadth of a rectangle is $\dfrac{5}{6}$ m and its area is 2 m². Find the length of the rectangle. Express your answer as a mixed number in its simplest form.

Ans: _____ m

---

18   The ratio of Shina's test marks to Kyle's test marks was 3 : 7.   Shina scored 16 fewer marks than Kyle.   How many marks did Kyle score?

Ans: _____

19   Round 199.99 to 1 decimal place.

Ans: _____

20   Mrs Pereira baked 400 tarts.   45% of the tarts she baked were egg tarts while the rest were chocolate tarts.   How many chocolate tarts did Mrs Pereira bake?

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   75% of a number is 36. What is the number?

Ans: _____

---

22   Derinda had 25 m of ribbon. She used it to make as many flowers as possible. She used $\frac{2}{3}$ m of ribbon to make each flower. How many metres of the ribbon were left?

Ans: _____ m

---

23 Brenda had 6 ℓ of orange juice. She drank $\dfrac{1}{2}$ of it in the morning and gave $\dfrac{1}{4}$ ℓ of it to her brother. How much orange juice did she have left in the end?

Ans: _____ ℓ

24 In a camp, the number of children is $\dfrac{3}{8}$ of the number of adults. $\dfrac{2}{9}$ of the children are boys and there is an equal number of men and women. What is the ratio of the number of girls to the number of women?

Ans: _____

25 Clarence, Amir and Jun Wei received some stickers. The ratio of the number of stickers that Clarence received to the number of stickers Amir received was 4 : 9. The ratio of the number of stickers Jun Wei received to the number of stickers Amir received was 4 : 3. Clarence received 24 stickers. How many stickers did Jun Wei receive?

Ans: _____

---

26 The ratio of the number of sweets Rachel had to the number of sweets Euodia had was 2 : 3 at first. After Rachel bought 8 more sweets, the ratio of the number of sweets Rachel had to the number of sweets Euodia had became 5 : 6. How many sweets did Euodia have?

Ans: _____

27   Mr Tan had $20 more than Mr Lee at first.   After Mr Tan spent $50 and
      Mr Lee spent half of his money, both of them had the same amount of
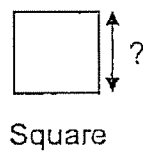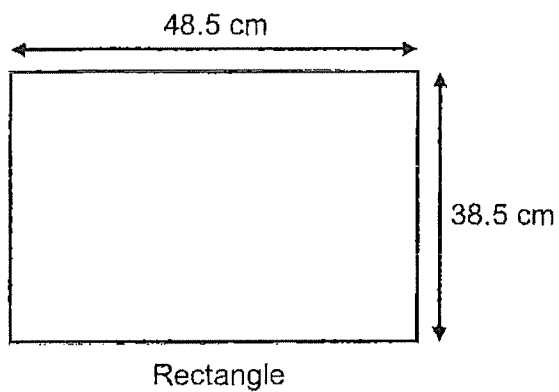   money left.   How much money did Mr Lee have at first?

Ans: $_____

28   Diane wanted to train for a marathon.   She started by running 1.6 km in
      the first week.   She increased her distance by 1.2 km every week from
      the previous week.   Find the total distance that she ran in the first 5
      weeks.

Ans: _____ km

83

29 A wire 210 cm long was cut into 2 pieces and bent to form a rectangle and a square. The length of the rectangle is 48.5 cm and its breadth is 38.5 cm. Find the length of one side of the square.

48.5 cm

38.5 cm

Rectangle

?

Square

Ans: _____ cm

84

30   The table below shows the number of toys collected by Sunshine Centre in Year 2021 and Year 2022.   Part of the table is covered by an ink blot. The number of soft toys collected and the total number of toys collected were both three-digit numbers.
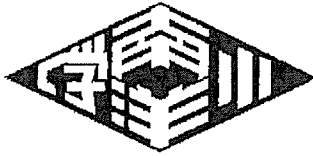
Type of Toys	Year 2021	Year 2022
Wooden Toys	121	80
Electronic Toys	65	74
Soft Toys	18⬛	200
Total number of toys	3⬛	354

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

Statement	True	False	Not possible to tell
In Year 2021, more than 50% of the toys collected were soft toys.			
In Year 2021, 20% of the toys collected were electronic toys.			
In Year 2022, the number of wooden toys collected was 40% of the number of soft toys collected.			

End of Paper

8

85

NANYANG PRIMARY SCHOOL

TERM 1 WEIGHTED ASSESSMENT 2023

PRIMARY 6

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 6 (   )

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 Jasper ran $6\dfrac{1}{10}$ km. Irfan ran $2\dfrac{7}{16}$ km more than Jasper. How far did they run altogether?

Ans: _____ km

---

2 The mass of each sack of rice is $4\dfrac{1}{5}$ kg. Find the total mass of 45 such sacks of rice.

Ans: _____ kg

---

3 Joy had a meal that cost $32.50 before GST at a restaurant. What was the cost of her meal after adding 8% GST?

Ans: $_____

1

87

4   Danny's scores for 5 games are shown in the table below.

Game	1st	2nd	3rd	4th	5th
Score	8	0	7	16	9

Find his average score.

Ans: _____

---

5   Siti has the exact amount of money to buy 84 bottled drinks or 126 canned drinks. She has already spent some of the money to buy 39 canned drinks and 42 bottled drinks. How many more bottled drinks can she buy with the remaining money?

Ans: _____

88

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. Miss Wong bought two identical suitcases at a year-end sale. The two suitcases cost $174 after discount. Find the price of one such suitcase before discount.

YEAR-END SALE!

40% discount for all suitcases

Ans: _____ [3]

7   Mr Mohammad took a taxi from home to his office.
    His taxi fare was based on the charges shown below.

| First 1 kilometre or less | $4.30 |
| Every additional 400 m or less | $0.24 |
| Every 45 seconds of waiting or less | $0.24 |

The taxi stopped once at a traffic light and travelled a total distance of
7 km to reach his office.   Mr Mohammad paid $9.10.   What was the
longest possible duration the taxi stopped at the traffic light?

Ans: _____ [3]

8   A rectangular tank measuring 32.5 cm by 22.5 cm by 18 cm was $\frac{5}{9}$-filled with water as shown below.   When Kamala poured 7 litres of water into the tank, some water overflowed.   Find the volume of water that overflowed.   Give your answer in litres.

Ans: _____ [3]

91
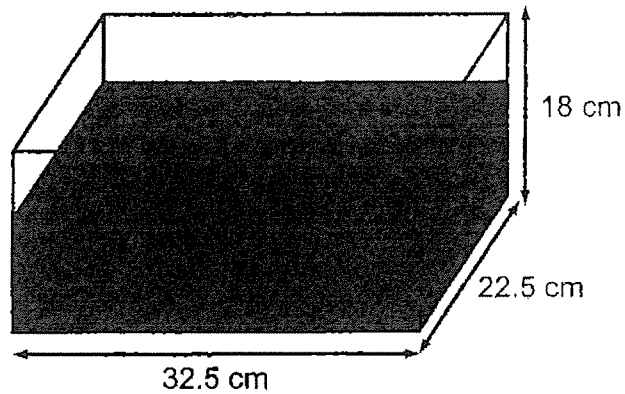
9   Amrit had some sugar at first.   He used 275 g of sugar to bake some muffins and $\frac{3}{5}$ of the remaining sugar to bake some cookies.   In the end, he had $\frac{1}{8}$ of the sugar left.   How much sugar did he have at first?

Ans: _____ [3]

10   In a class of 42 children, the average mass of the children was 37.5 kg. The average mass of the girls in the class was 36.7 kg. The average mass of the boys in the class was 38.8 kg. How many more girls than boys were there in the class?

Ans: _____ [3]

11   A group of children is put into 2 halls, hall A and hall B.   The ratio of the number of children in hall A to the number of children in hall B is 3 : 8. In hall A, the ratio of the number of boys to the number of girls is 5 : 2. There are 18 girls in hall A.   Find the total number of children in both halls.

Ans: _____ [3]

12   In the figure below, ABCD is a trapezium.   APB, DQC, RCS and PQR
are straight lines.   APB is parallel to DQC and AD is parallel to PQR.
$\angle BCS = 50°$, $\angle BCQ = 90°$ and $\angle QRC = 95°$.
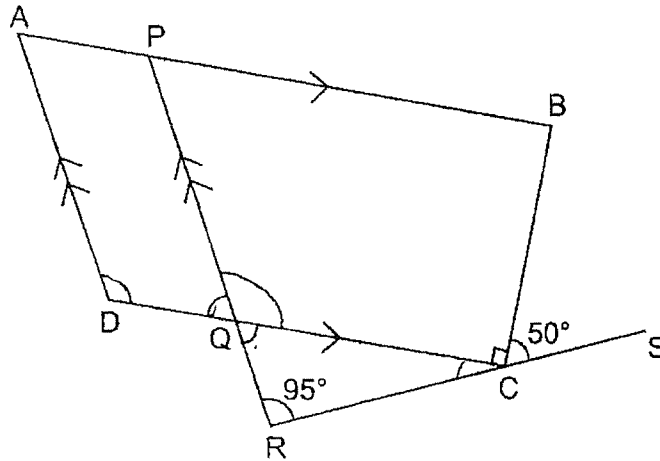
(a)   Find $\angle DQP$.

Ans: (a) _____ [2]

(b)   Find $\angle ADQ$.

Ans: (b) _____ [2]

95

13   Ashraf had some money at first.   He spent 15% of it on food and $810
on a new laptop.   He then gave 20% of the remainder to his brother.   In
the end, he had $304 left.

(a)   How much money did Ashraf give to his brother?

Ans: (a)   _____ [2]

(b)   How much money did Ashraf have at first?

Ans: (b)   _____ [3]

14 Susan had 117 beads and marbles altogether. The beads and marbles were either white or black. 20% of the beads and 50% of the marbles were white. There were as many black beads as black marbles.

(a) In the statement below, circle the phrase 'more than', 'fewer than' or 'the same as' that correctly describes the comparison between the number of beads and marbles Susan had.

> The number of beads Susan had was
>
> (more than / fewer than / the same as)
>
> the number of marbles she had.

(b) How many beads did Susan have?

Ans: (b) _____ [3]

97

15   Christopher and Helen had 1044 erasers altogether at first.   Christopher

gave $\frac{4}{5}$ of his erasers to his brother.   Helen gave $\frac{5}{8}$ of her erasers to

her sister.   In the end, Helen had 150 erasers more than Christopher.
How many erasers did Christopher have at first?

Ans: _____ [4]

16   The figure below is made up of 2 squares, ABCD and DEFG. X is a point on GD and Y is a point on DE. BC = 7 cm, FE = 6 cm and XD = DY = YE.
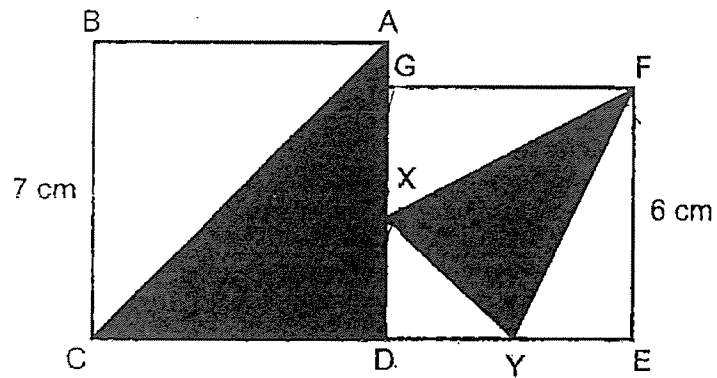
(a)   Find the total area of the shaded parts.

Ans: (a) _____ [3]

(b)   What fraction of the figure is unshaded?

Ans: (b) _____ [2]

17 The table below shows the number of clips in different coloured containers.

Colour of container	Number of clips in each container
White	30
Blue	50
Green	60

(a) Gwen has a total of 10 white containers and green containers. What is the smallest possible difference between the total number of clips in Gwen's white containers and the total number of clips in her green containers?

Ans: (a) _____ [2]

(b) Clement has some white containers and some blue containers. The ratio of the total number of clips in Clement's white containers to the total number of clips in his blue containers is 3 : 2. Express the number of his blue containers as a fraction of the total number of his containers.

Ans: (b) _____ [3]

End of Paper

NANYANG PRIMARY SCHOOL

TERM 1 WEIGHTED ASSESSMENT
2023

PRIMARY 6

MATHEMATICS
PAPER 1
(BOOKLET A)

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Name: _____ (   )

Primary 6 (   )

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 Janice is $\frac{5}{7}$ as tall as Xiao Ming. What is the ratio of Xiao Ming's height to Janice's height?

Xiao Ming : Janice
7 : 5

(1) 5 : 7
(2) 7 : 5
(3) 5 : 12
(4) 7 : 12

(2)

2 A pail contains 28 ℓ of water. A tank contains 800 times as much water as the pail. How many litres of water are there in the tank?

(1) 16 400 ℓ
(2) 22 400 ℓ
(3) 64 400 ℓ
(4) 224 000 ℓ

$28 \times 800 = 28 \times 8 \times 100$
$= 224 \times 100$
$= 22\ 400$

(2)

$\begin{array}{r} 28 \\ \times 8 \\ \hline 224 \end{array}$

3 What is the value of $\frac{2}{3} + \frac{1}{5}$?

(1) $\frac{3}{8}$
(2) $\frac{3}{15}$
(3) $\frac{2}{15}$
(4) $\frac{13}{15}$

$\frac{10}{15} + \frac{3}{15}$
$= \frac{13}{15}$

(4)

4 In the number line below, what is the value of X ?

$2\frac{6}{16}$ $2\frac{3}{8}$ 2

X

$2\frac{5}{16}$

(1) $2\frac{1}{4}$
(2) $2\frac{3}{15}$
(3) $2\frac{5}{16}$
(4) $2\frac{1}{2}$

(3)
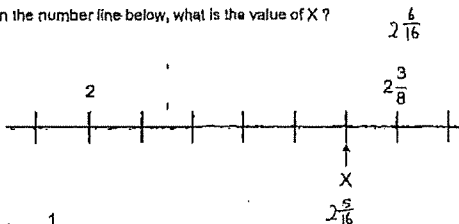
5 What is the value of $\frac{3}{7} \times \frac{5}{2}$?

(1) $\frac{8}{9}$
(2) $\frac{15}{14}$
(3) $\frac{15}{9}$
(4) $\frac{8}{35}$

$\frac{3}{7} \times \frac{5}{2} = \frac{15}{14}$

(2)

6 $\frac{3}{4}$ of a pizza was shared equally among 5 people. What fraction of the pizza did each person receive?

(1) $\frac{3}{20}$
(2) $\frac{4}{15}$
(3) $\frac{20}{3}$
(4) $\frac{7}{45}$

$\frac{3}{4} \div \frac{5}{1}$
$= \frac{3}{4} \times \frac{1}{5}$
$= \frac{3}{20}$

(1)

2

3

1-5

7   Express 10.01 kg in kilograms and grams.

$$0.01 \times 1000 = 10$$

(1)   1 kg 1 g

(2)   10 kg 1 g

(3)   10 kg 10 g   (3)

(4)   100 kg 10 g

8   Ninety identical pencils cost $57.60. What is the cost of one such pencil?

(1) $0.54

(2) $0.64

(3) $0.74

(4) $6.40

$$\$57.60 \div 90 = \$ \frac{57.60 \div 9}{10} \div 10$$
$$= \$6.40 \div 10$$
$$= \$0.64$$

(2)

```
        6.40
    9) 57.60
     - 54
        3 6
      - 36
         0
```

9   Sathya had 250 fruits. 50 of them were papayas, 110 of them were mangoes and the rest were pears. What percentage of her fruits were pears?

(1)   20%

(2)   36%

(3)   44%

(4)   64%

Pears → 250 - 50 - 110
$$= 200 - 110$$
$$= 90$$

(2)

$$\frac{90}{250} = \frac{9}{25} \times 4$$
$$= \frac{36}{100}$$
$$= 36\%$$

10   Which one of the following is likely to be the mass of a honeydew sold in a supermarket?

(3)

(1)   2.5 g

(2)   25 g

(3)   2.5 kg

(4)   250 kg

11   The length, breadth and height of a box are in the ratio 3 : 2 : 1 respectively. The length of the box is 6 cm. Find the volume of the box.

L : B : H

(1)   12 cm³
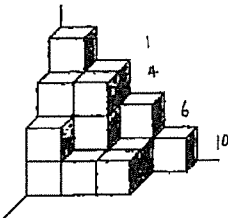
(2)   18 cm³

(3)   36 cm³

(4)   48 cm³

3 units = 6 cm
1 unit = 6 ÷ 3
       = 2
2 units = 2 × 2
        = 4

Volume = Length × Breadth × Height
       = 6 × 4 × 2
       = 24 × 2
       = 48   (4)

12   The solid below is made up of 1 cm cubes. How many more 1-cm cubes must be added to the solid to make it a cuboid measuring 4 cm by 3 cm by 4 cm?

(1)   27

(2)   28

(3)   29

(4)   30

4 × 3 × 4 = 12 × 4
          = 48

1 + 4 + 6 + 10 = 21

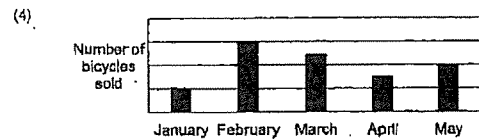48 - 21 = 27   (1)

13   The table below shows the number of bicycles sold each month by a shop.

Month	Number of bicycles sold
January	53
February	150
March	124
April	76
May	99

→ least (February)
→ most

Which of the following bar graphs best represents the information show in the table?

(1)

January February March April May

(2)

January February March April May

(3)

January February March April May

(4)

January February March April May

(4)

14   Sally had some apples. $\frac{3}{5}$ of the apples were red. She then gave $\frac{1}{2}$ of the red apples to her sister. What fraction of Sally's apples were given to her sister?

(1) $\frac{1}{5}$

$\frac{3}{5} \times \frac{1}{2} = \frac{3}{10}$

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

(3) $\frac{1}{10}$

(4)

(4) $\frac{3}{10}$

15   The first 15 numbers of a number pattern are given below.

pattern

9, 0, 8, 6, 9, 0, 8, 6, 9, 0, 8, 6, 9, 0, 8, ...
1st   15th

What is the 274th number?

(1) 0

$274 \div 4 = 68R2$

(2) 6

(3) 8

(1)

(4) 9

$$\begin{array}{r} 68 \\ 4\overline{)274} \\ -24 \\ \hline 34 \\ -32 \\ \hline 2 \end{array}$$

8

NANYANG PRIMARY SCHOOL

TERM 1 WEIGHTED ASSESSMENT
2023

PRIMARY 6

MATHEMATICS
PAPER 1
(BOOKLET B)

Total Duration for Booklets A and B: 1 hour

INSTRUCTIONS TO PUPILS

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5. The use of calculators is **NOT** allowed.

Name: _____ (   )

Class: Primary 6 (   )

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 $72 \div 8 - 2 \times 3 + 77$.

$72 \div 8 - 2 \times 3 + 77$

$= 9 - 2 \times 3 + 77$

$= 9 - 6 + 77$

$= 3 + 77$

$= 80$ (ans)

Ans: _____80_____

17   The breadth of a rectangle is $\frac{5}{6}$ m and its area is 2 m². Find the length of the rectangle. Express your answer as a mixed number in its simplest form.

Length $= 2 \div \frac{5}{6}$

$= \frac{2}{1} \times \frac{6}{5}$

$= \frac{12}{5}$

$= 2\frac{2}{5}$ m (ans)

Ans: _____$2\frac{2}{5}$_____ m

---

18   The ratio of Shina's test marks to Kyle's test marks was 3 : 7. Shina scored 16 fewer marks than Kyle. How many marks did Kyle score?

$7 - 3 = 4$

4 units $= 16$

1 unit $= 16 \div 4$

$= 4$

7 units $= 4 \times 7$

$= 28$ (ans)

Ans: _____28_____

19   Round 199.99 to 1 decimal place.

$199.99 \approx 200.0$ (ans)

Ans: _____200.0_____

20   Mrs Pereira baked 400 tarts. 45% of the tarts she baked were egg tarts while the rest were chocolate tarts. How many chocolate tarts did Mrs Pereira bake?

$100\% - 45\% = 55\%$

$\frac{55}{100} \times \frac{400}{1}$

$= 55 \times 4$

$= 220$ (ans)

OR

$\frac{45}{100} \times \frac{400}{1} = 45 \times 4$

$= 180$

$400 - 180 = 220$ (ans)

Ans: _____220_____

2

3

103

21   75% of a number is 36. What is the number?

$$75\% \rightarrow 36$$
$$\div 3 \Big(\quad 25\% \rightarrow 36 \div 3$$
$$= 12$$
$$\div 4 \Big(\quad 100\% \rightarrow 12 \times 4$$
$$= 48 \ (ans)$$

OR
$$75\% = \frac{3}{4}$$
$$\frac{3}{4} \rightarrow 36$$
$$\frac{1}{4} \rightarrow 36 \div 3$$
$$= 12$$
$$\frac{4}{4} \rightarrow 12 \times 4$$
$$= 48 \ (ans)$$

Ans: _____48_____

22   Derinda had 25 m of ribbon. She used it to make as many flowers as possible. She used $\frac{2}{3}$ m of ribbon to make each flower. How many metres of the ribbon were left?

$$\begin{array}{r} 37 \\ 2\overline{)75} \\ -6 \\ \overline{15} \\ -14 \\ \overline{1} \end{array}$$

$$25 \div \frac{2}{3} = \frac{25}{1} \times \frac{3}{2}$$
$$= \frac{75}{2}$$
$$= 37\frac{1}{2}$$

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

Ans: _____$\frac{1}{3}$_____ m

3

23   Brenda had 6 ℓ of orange juice. She drank $\frac{1}{2}$ of it in the morning and gave $\frac{1}{4}$ ℓ of it to her brother. How much orange juice did she have left in the end?

$$\text{morning} \rightarrow \frac{1}{2} \times \frac{6}{1}$$
$$= 3 \ell$$
$$\text{Left} \rightarrow 6 - 3 - \frac{1}{4}$$
$$= 3 - \frac{1}{4}$$
$$= 2\frac{4}{4} - \frac{1}{4}$$
$$= 2\frac{3}{4} \ell \text{ (ans)}$$

Ans: _____$2\frac{3}{4}$_____ ℓ

24   In a camp, the number of children is $\frac{3}{8}$ of the number of adults. $\frac{2}{9}$ of the children are boys and there is an equal number of men and women. What is the ratio of the number of girls to the number of women?

children : Adult   boys : girls : children
   3 : 8   2 : 7 : 9
   9 : 24

$$24 \div 2 = 12$$

girls : women
  7 : 12 (ans)

Ans: _____7 : 12_____

4

25   Clarence, Amir and Jun Wei received some stickers. The ratio of the number of stickers that Clarence received to the number of stickers Amir received was 4 : 9. The ratio of the number of stickers Jun Wei received to the number of stickers Amir received was 4 : 3. Clarence received 24 stickers. How many stickers did Jun Wei receive?

Clarence : Amir   Jun Wei : Amir
   4 : 9   4 : 3
                            12 : 9

4 units = 24
1 unit = 24 ÷ 4
       = 6
12 units = 6 × 12
         = 72 (ans)   Ans: _____72_____

26   The ratio of the number of sweets Rachel had to the number of sweets Euodia had was 2 : 3 at first. After Rachel bought 8 more sweets, the ratio of the number of sweets Rachel had to the number of sweets Euodia had became 5 : 6. How many sweets did Euodia have?

                                    Euodia constant
At first,   End,
Rachel : Euodia   Rachel : Euodia
   2 : 3   5 : 6
   4 : 6

5 - 4 = 1
1 unit = 8
6 units = 8 × 6   Ans: _____48_____
        = 48 (ans)

5

27   Mr Tan had $20 more than Mr Lee at first. After Mr Tan spent $50 and Mr Lee spent half of his money, both of them had the same amount of money left. How much money did Mr Lee have at first?

Mr Tan   left   spent $50
Mr Lee

                left   spent

1 unit = $50 - $20
       = $30

2 units = $30 × 2
        = $60 (ans)

Ans: $_____60_____

28   Diane wanted to train for a marathon. She started by running 1.6 km in the first week. She increased her distance by 1.2 km every week from the previous week. Find the total distance that she ran in the first 5 weeks.

1st   1.6
2nd   1.6 + 1.2
3rd   1.6 + 1.2 + 1.2   ?
4th   1.6 + 1.2 + 1.2 + 1.2
5th   1.6 + 1.2 + 1.2 + 1.2 + 1.2

1.6 × 5 = 8
1.2 × 10 = 12
8 + 12 = 20 (ans)   Ans: _____20_____ km

6

104

4

29 A wire 210 cm long was cut into 2 pieces and bent to form a rectangle and a square. The length of the rectangle is 48.5 cm and its breadth is 38.5 cm. Find the length of one side of the square.

48.5 cm

Rectangle   Square   ↑?

$$^1 4\overset{\cdot}{8}.5$$
$$+ 38.5$$
$$\overline{87.0}$$
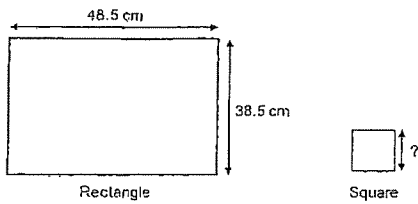
Perimeter of rectangle = $(48.5 + 38.5) \times 2$

$$= 87 \times 2$$

$$= 174$$

$$^1 87$$
$$\times 2$$
$$\overline{174}$$

$$210 - 174 = 36$$

$$36 \div 4 = 9 \text{ cm (ans)}$$

$$^{1}\overset{10}{2}\overset{10}{\cancel{1}}\overset{10}{\cancel{0}}$$
$$- 174$$
$$\overline{36}$$

Ans: _____9_____ cm

7

30 The table below shows the number of toys collected by Sunshine Centre in Year 2021 and Year 2022. Part of the table is covered by an ink blot. The number of soft toys collected and the total number of toys collected were both three-digit numbers.

Type of Toys	Year 2021	Year 2022
Wooden Toys	121	80
Electronic Toys	65	74
Soft Toys	18▨	200
Total number of toys	3▨	354

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

Statement	True	False	Not possible to tell
In Year 2021, more than 50% of the toys collected were soft toys.			✓
In Year 2021, 20% of the toys collected were electronic toys.		✓	
In Year 2022, the number of wooden toys collected was 40% of the number of soft toys collected.	✓		

$121 + 65 = 186$

$20\% \to 65$
$10\% \to 65 \div 2$
$\quad = 32.5$
$100\% \to 32.5 \times 10$
$\quad = 325$

$121 + 65 + 180$
$= 186 + 180$
$= 366$

Total toys in 2021 is at least 366

$\dfrac{80}{200} = \dfrac{40}{100}$
$\quad = 40\%$

End of Paper

8

A school logo appears

NANYANG PRIMARY SCHOOL

TERM 1 WEIGHTED ASSESSMENT
2023

PRIMARY 6

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 6 (   )

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 Jasper ran $6\frac{1}{10}$ km. Irfan ran $2\frac{7}{16}$ km more than Jasper. How far did they run altogether?

Irfan $\to 2\frac{7}{16} + 6\frac{1}{10}$

$= 8\frac{43}{80}$

$8\frac{43}{80} + 6\frac{1}{10} = 14\frac{51}{80}$ (ans)

Ans: _____$14\frac{51}{80}$_____ km

2 The mass of each sack of rice is $4\frac{1}{5}$ kg. Find the total mass of 45 such sacks of rice.

$4\frac{1}{5} \times 45 = 189$ (ans)

Ans: _____189_____ kg

3 Joy had a meal that cost $32.50 before GST at a restaurant. What was the cost of her meal after adding 8% GST?

$100\% + 8\% = 108\%$

$\dfrac{108}{100} \times \$32.50 = \$35.10$ (ans)

Ans: $_____35.10_____

1

5

4   Danny's scores for 5 games are shown in the table below.

Game	1st	2nd	3rd	4th	5th
Score	8	0	7	16	9

Find his average score.

$$\frac{8+0+7+16+9}{5} = \frac{40}{5}$$

$$= 8 \quad (ans)$$

Ans: ___8___

---

5   Siti has the exact amount of money to buy 84 bottled drinks or 126 canned drinks. She has already spent some of the money to buy 39 canned drinks and 42 bottled drinks. How many more bottled drinks can she buy with the remaining money?

84 bottled → 126 canned

1 bottled → $\frac{126}{84}$ canned

= 1·5

39 ÷ 1·5 = 26

26 bottled → 39 canned

84 − 26 − 42 = 16 (ans)

Ans: ___16___

2

---

7   Mr Mohammad took a taxi from home to his office.
His taxi fare was based on the charges shown below.

First 1 kilometre or less	$4.30
Every additional 400 m or less	$0.24
Every 45 seconds of waiting or less	$0.24

The taxi stopped once at a traffic light and travelled a total distance of 7 km to reach his office. Mr Mohammad paid $9.10. What was the longest possible duration the taxi stopped at the traffic light?

7 − 1 = 6

6 km = 6000 m

6000 ÷ 400 = 15

15 × $0.24 = $3.60

$3.60 + $4.30 = $7.90

$9.10 − $7.90 = $1.20

$1.20 ÷ $0.24 = 5

5 × 45 = 225 s (ans)

Ans: ___225 s___   [3]

4

6   Miss Wong bought two identical suitcases at a year-end sale. The two suitcases cost $174 after discount. Find the price of one such suitcase before discount.

YEAR-END SALE!
40% discount for all suitcases

1 suitcase after discount → $174 ÷ 2
= $87

100% − 40% = 60%

÷6 { 60% → $87
10% → $87 ÷ 6

×10 { = $14·50
100% → $14·50 × 10

= $145 (ans)

Ans: ___$145___   [3]

3

---

8   A rectangular tank measuring 32.5 cm by 22.5 cm by 18 cm was $\frac{5}{9}$-filled with water as shown below. When Kamala poured 7 litres of water into the tank, some water overflowed. Find the volume of water that overflowed. Give your answer in litres.

18 cm
22.5 cm
32.5 cm
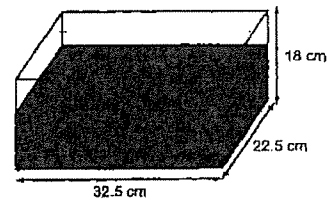
Volume of tank = 32·5 × 22·5 × 18
= 13 162·5

$1 - \frac{5}{9} = \frac{4}{9}$

$\frac{4}{9}$ × 13162·5 = 5850

7ℓ = 7000 cm³

7000 − 5850 = 1150

1150 cm³ = 1·15 ℓ (ans)

Ans: ___1·15 ℓ___   [3]

5

9 Amnt had some sugar at first. He used 275 g of sugar to bake some muffins and $\frac{3}{5}$ of the remaining sugar to bake some cookies. In the end, he had $\frac{1}{8}$ of the sugar left. How much sugar did he have at first?

remainder

275 g | cookies | left
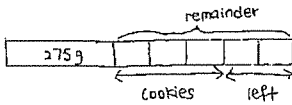
$\frac{1}{8}$ of sugar $\rightarrow$ 2 units

$\frac{8}{8}$ of sugar $\rightarrow$ 2 × 8

= 16 units

16 - 5 = 11

11 units = 275

1 unit = 275 ÷ 11

= 25

16 units = 25 × 16

= 400 g (ans)

Ans: _____400 g_____ [3]

6

10 In a class of 42 children, the average mass of the children was 37.5 kg. The average mass of the girls in the class was 36.7 kg. The average mass of the boys in the class was 38.8 kg. How many more girls than boys were there in the class?

37.5

36.7 | 36.7 | 36.7 | 38.8 | 38.8 | 38.8
G G G   B B B
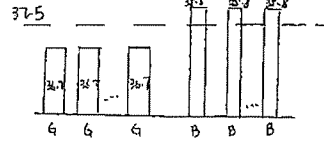
37.5 - 36.7 = 0.8
↑
need to top up
0.8 kg per girl

38.8 - 37.5 = 1.3
↑
need to take away 1.3 kg per boy

13 + 8 = 21

42 ÷ 21 = 2

13 × 2 = 26 → number of girls

8 × 2 = 16 → number of boys

26 - 16 = 10 (ans)

OR

Supposition method

42 × 37.5 = 1575

Suppose all 42 are girls

42 × 36.7 = 1541.4

1575 - 1541.4 = 33.6

38.8 - 36.7 = 2.10

33.6 ÷ 2.10 = 16 → b

42 - 16 = 26 → girls

26 - 16 = 10 (ans)

Ans: _____10_____ [3]

7

11 A group of children is put into 2 halls, hall A and hall B. The ratio of the number of children in hall A to the number of children in hall B is 3 : 8. In hall A, the ratio of the number of boys to the number of girls is 5 : 2. There are 18 girls in hall A. Find the total number of children in both halls.

In A,

A : B   Boys : Girls : total
3 : 8   5 : 2 : 7
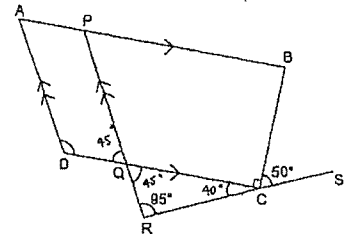21 : 56   15 : 6 : 21

6 units = 18

1 unit = 18 ÷ 6
      = 3

21 + 56 = 77

77 units = 3 × 77
        = 231 (ans)

Ans: _____231_____ [3]

8

12 In the figure below, ABCD is a trapezium. APB, DQC, RCS and PQR are straight lines. APB is parallel to DQC and AD is parallel to PQR. ∠BCS = 50°, ∠BCQ = 90° and ∠QRC = 95°.

(a) Find ∠DQP.

∠RCQ = 180° - 90° - 50°
     = 40°

∠RQC = 180° - 95° - 40°
     = 45° (ans)
     = ∠DQP

Ans: (a) _____45°_____ [2]

(b) Find ∠ADQ.

∠ADQ = 180° - 45°
     = 135° (ans)

Ans: (b) _____135°_____ [2]

9

13 Ashraf had some money at first. He spent 15% of it on food and $810 on a new laptop. He then gave 20% of the remainder to his brother. In the end, he had $304 left.

(a) How much money did Ashraf give to his brother?

$$100\% - 20\% = 80\%$$

$$80\% \text{ of remainder} \rightarrow \$304$$

$$20\% \text{ of remainder} \rightarrow \$304 \div 4$$

$$\rightarrow \$76 \text{ (ans)}$$

Ans: (a) _____$76_____ [2]

(b) How much money did Ashraf have at first?

$$\text{remainder} \rightarrow \$76 \times 5$$
$$= \$380$$

$$100\% - 15\% = 85\%$$

$$85\% \rightarrow \$380 + \$810$$
$$= \$1190$$

$$1\% \rightarrow \$1190 \div 85$$
$$= \$14$$

$$100\% \rightarrow \$14 \times 100$$
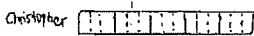$$= \$1400 \text{ (ans)}$$
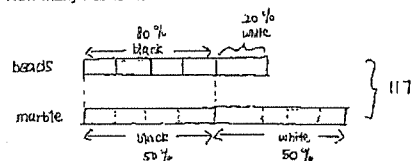
Ans: (b) ___$1400___ [3]

10

---

14 Susan had 117 beads and marbles altogether. The beads and marbles were either white or black. 20% of the beads and 50% of the marbles were white. There were as many black beads as black marbles.

(a) In the statement below, circle the phrase 'more than', 'lower than' or 'the same as' that correctly describes the comparison between the number of beads and marbles Susan had.

> The number of beads Susan had was
>
> (more than / (lower than) / the same as)
>
> the number of marbles she had.

[1]

(b) How many beads did Susan have?

$$80\% = \frac{4}{5}$$
$$50\% = \frac{1}{2}$$

$$13 \text{ units} = 117$$
$$1 \text{ unit} = 117 \div 13$$
$$= 9$$

$$5 \text{ units} = 9 \times 5$$
$$= 45 \text{ (ans)}$$

or

$$\frac{4}{5} B \rightarrow \frac{1}{2} M$$
$$\frac{4}{5} B \rightarrow \frac{4}{8} M$$
$$5 + 8 = 13$$
$$13 \text{ units} = 117$$
$$5 \text{ units} = \frac{117}{13} \times 5$$
$$= 45 \text{ (ans)}$$

Ans: (b) ___45___ [3]

11

---

15 Christopher and Helen had 1044 erasers altogether at first. Christopher gave $\frac{4}{6}$ of his erasers to his brother. Helen gave $\frac{5}{8}$ of her erasers to her sister. In the end, Helen had 150 erasers more than Christopher. How many erasers did Christopher have at first?
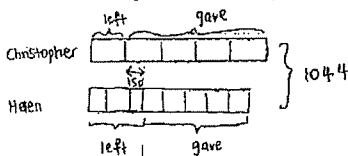
↓ make them of the same unit

$$150 \div 3 = 50$$

$$3 \times 5 = 15 \text{ units} \rightarrow \text{Christopher}$$

$$50 \times 8 = 400$$

$$8 \text{ units} + 400 \rightarrow \text{Helen}$$

$$15 + 8 = 23$$

$$23 \text{ units} + 400 \rightarrow 1044$$

$$23 \text{ units} = 644$$
$$1 \text{ unit} = 644 \div 23$$
$$= 28$$
$$15 \text{ units} = 28 \times 15$$
$$= 420 \text{ (ans)}$$

Ans: ___420___ [4]

12

---

16 The figure below is made up of 2 squares, ABCD and DEFG. X is a point on GD and Y is a point on DE. BC = 7 cm, FE = 6 cm and XD = DY = YE.
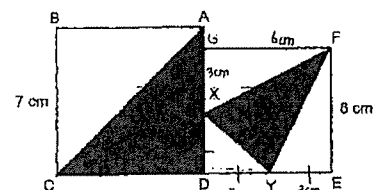
(a) Find the total area of the shaded parts.

$$6 \div 2 = 3$$

$$\text{Area of } \triangle ACD = \frac{1}{2} \times 7 \times 7$$
$$= 24.5$$

$$\text{Area of } \triangle XYF = \text{Area of DEFG} - \text{Area } \triangle DXY - \text{Area } \triangle YEF - \text{Area }$$
$$= (6 \times 6) - (\frac{1}{2} \times 3 \times 3) - (\frac{1}{2} \times 3 \times 6)$$
$$= 36 - 4.5 - 9 - 9$$
$$= 13.5$$

$$24.5 + 13.5 = 38 cm^2$$

Ans: (a) ___$38 cm^2$___ [3]

(b) What fraction of the figure is unshaded?

$$\text{Area of figure} = (7 \times 7) + (6 \times 6)$$
$$= 49 + 36$$
$$= 85$$

$$\text{unshaded} \rightarrow 85 - 38$$
$$= 47$$

$$\frac{\text{unshaded}}{\text{total}} \rightarrow \frac{47}{85} \text{ (ans)}$$

Ans: (b) ___$\frac{47}{85}$___ [2]

13

108

17 The table below shows the number of clips in different coloured containers.

Colour of container	Number of clips in each container
White	30
Blue	50
Green	60

(a) Gwen has a total of 10 white containers and green containers. What is the smallest possible difference between the total number of clips in Gwen's white containers and the total number of clips in her green containers?

Number of clips in green container is twice the number of clips in white container.

For every 2 white containers to 1 green container, the difference is zero.

$2+1 = 3$

$10 \div 3 = 3 R 1$

$3 \times 2 + 1 = 7$

$10 - 7 = 3$

$7 \times 30 = 210$

$3 \times 60 = 180$

$210 - 180 = 30 (ans)$

Ans: (a) _____30_____ [2]

(b) Clement has some white containers and some blue containers. The ratio of the total number of clips in Clement's white containers to the total number of clips in his blue containers is 3 : 2. Express the number of his blue containers as a fraction of the total number of his containers.

white clips : blue clips

3 : 2

150 : 100

$150 \div 30 = 5 \rightarrow$ white containers

$100 \div 50 = 2 \rightarrow$ blue containers

$2 + 5 = 7$

$\dfrac{blue}{total} \rightarrow \dfrac{2}{7}$ (ans)   Ans: (b) _____$\dfrac{2}{7}$_____ [3]

End of Paper

14

9
END

9