28

RED SWASTIKA SCHOOL

2016 SEMESTRAL ASSESSMENT 2

MATHEMATICS
PAPER 1

Name : _____ (   )

Class : Primary 5 / _____

Date   : 26 October 2016

BOOKLET A

15 Questions
20 Marks
Duration of Paper 1 (Booklets A & B): 50 minutes

<u>Note:</u>

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

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

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1 Round off 606 606 to the nearest ten thousand.

    (1)   600 000
    (2)   606 000
    (3)   607 000
    (4)   610 000

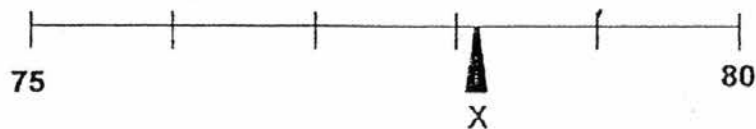**2** Which one of the following fractions is the same as 10 eighths?

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

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

    (3) $8\frac{1}{10}$

    (4) $10\frac{1}{8}$

3 What is the value of 579 ÷ 100?

    (1)   0.579
    (2)   5.79
    (3)   57.9
    (4)   57 900

**4** In the number line shown below, which value is closest to the letter X?


    (1)   77.2
    (2)   77.7
    (3)   78.2
    (4)   78.7

5	Dominic's height is 160 cm. His sister is 20 cm shorter than him. Find the ratio of Dominic's height to his sister's height.

(1)	1 : 8
(2)	8 : 1
(3)	7 : 8
(4)	8 : 7

6	24 out of 40 students like chicken burger while the rest of them like fish burger. Find the percentage of students who like fish burger.

(1)	16%
(2)	24%
(3)	40%
(4)	60%

7	Which of the following is the same as 6 090 g?

(1)	6 kg 9 g
(2)	6 kg 90 g
(3)	60 kg 9 g
(4)	60 kg 90 g

8	What is the difference between 14 tens and 14 tenths?

(1)	12.7
(2)	13.86
(3)	138.6
(4)	139.86

9	What is the cost of 9 ten-cent stamps and 3 fifty-cent stamps?

(1)	$1.20
(2)	$2.40
(3)	$3.20
(4)	$4.40

10 How many pair(s) of parallel lines are there in the figure below?
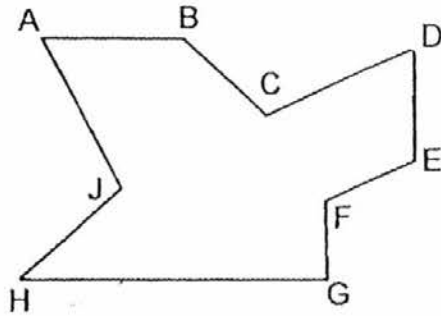
(1) 1
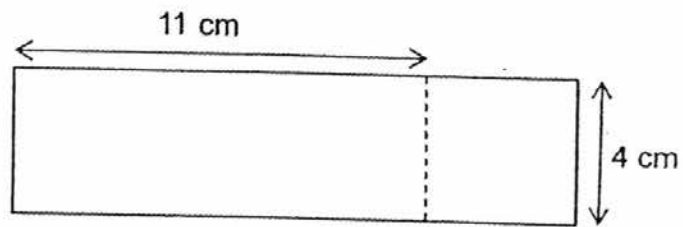(2) 2
(3) 3
(4) 4

11 In the figure, PQ and RS are straight lines. ∠x and ∠y are equal. Find ∠x.
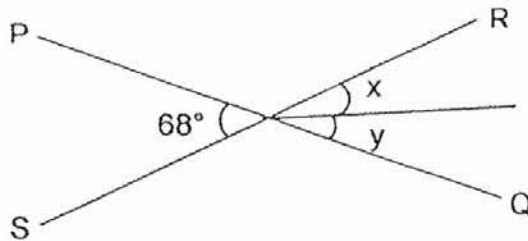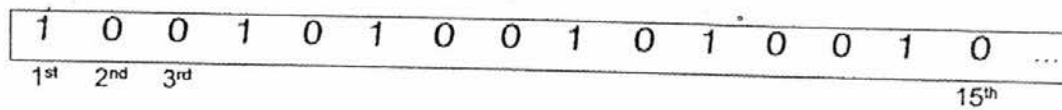

(1) 11°
(2) 22°
(3) 34°
(4) 68°

12 The figure below is made up of a square and a rectangle. Find its perimeter.

11 cm
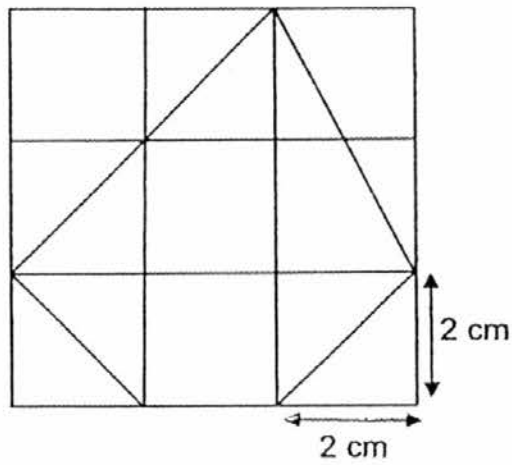
4 cm

(1) 15 cm
(2) 38 cm
(3) 42 cm
(4) 46 cm

13 A pattern is formed using the numbers 1 and 0. The first 15 numbers are shown below.

| 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | ... |

1st 2nd 3rd   15th

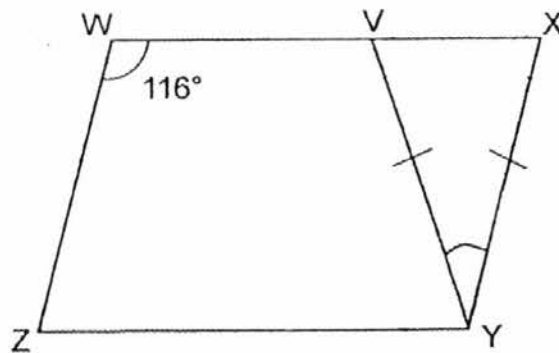What is the sum of the first 100 numbers?

(1) 39
(2) 40
(3) 41
(4) 42

14   Find the shaded area in the square grid below.

2 cm

2 cm

(1)   16 cm^2
(2)   18 cm^2
(3)   20 cm^2
(4)   24 cm^2

15   The figure below is not drawn to scale. WXYZ is a parallelogram.
     Find ∠XYV.

W   V   X

116°

Z   Y

(1)   26°
(2)   52°
(3)   64°
(4)   84°

5

RED SWASTIKA SCHOOL

2016 SEMESTRAL ASSESSMENT 2

MATHEMATICS
PAPER 1

Name : _____ (   )

Class : Primary 5 / _____

Date : 26 October 2016

BOOKLET B

15 Questions
20 Marks

In this booklet, you should have the following:
(a) Page 6 to Page 11
(b) Questions 16 to 30

MARKS

	OBTAINED	POSSIBLE
BOOKLET A		20
BOOKLET B		20
TOTAL		40

Parent's Signature : _____

Questions 16 to 25 carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

16   What is the value of $30 - 3 \times 4 + 24 \div 4$?

Ans: _____

17   Mrs Tan had a ribbon of 6m long. She cut it 5 times into smaller pieces of equal length to wrap a present. What was the length of one smaller piece of the ribbon?

Ans: _____ m

18   Find the missing number in the box.

$0.396 = 0.3 +$ [?] $+ 0.026$

Ans: _____

19   Find the value of $9.94 \div 20$.

Ans: _____

20 Jason took 1 hour 25 minutes to travel from school to his house. If he arrived home at 3.30 p.m., what time did he leave the school?
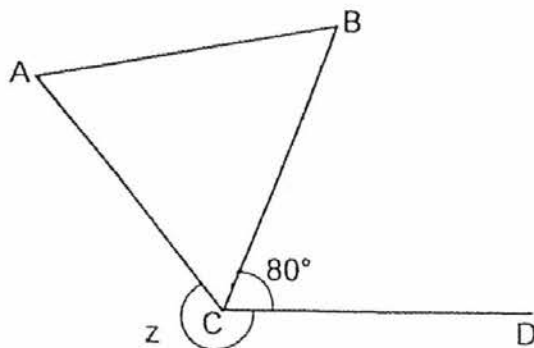
Ans: _____ p.m.

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21 The area of the shaded square is 16 cm². What is the area of the shaded triangle?
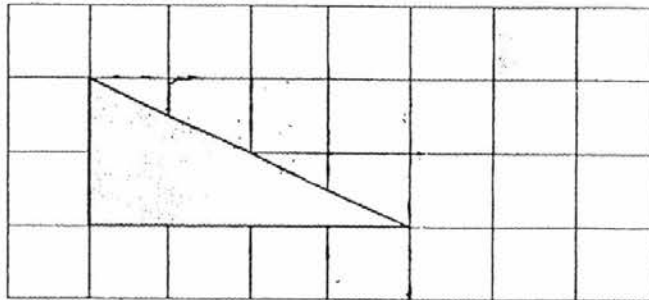
Ans: _____ cm²

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22 In the figure below, ABC is an equilateral triangle and $\angle BCD = 80°$. Find $\angle z$.
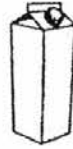

Ans: _____

23   Mary mixed 1 bottle of orange juice, 2 cans of soda water and 2 packets of pineapple juice to create her fruit punch for her birthday party. What was the total volume of the fruit punch in litres?
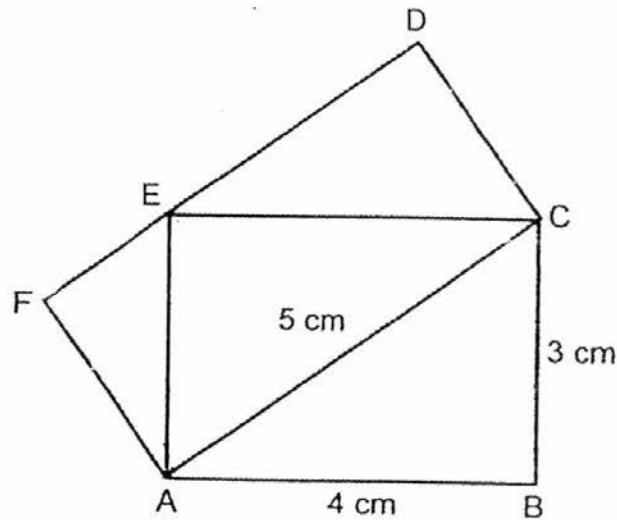
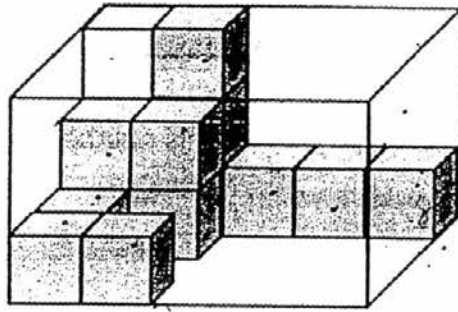| Orange juice	Soda water	Pineapple juice
1.5 ℓ	325 m ℓ	750 cm³

Ans: _____ ℓ

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24   In the figure below, ABCE and ACDF are rectangles and DEF is a straight line. AB = 4 cm, BC = 3 cm and AC = 5 cm. Find the length of AF.

Ans: _____ cm

8

25 The figure shows a rectangular container partly filled with unit cubes.
How many more cubes are needed to fill the container completely?

Ans: _____

Questions 26 to 30 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

26 $\frac{2}{5}$ of a number is 76. What is $\frac{1}{2}$ of this number?

Ans: _____

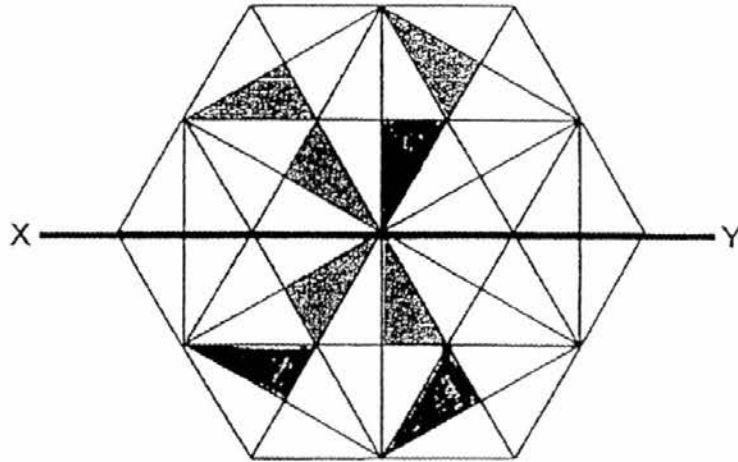27 What is the price of the water bottle after adding 7% GST?

$12
(Price before GST)
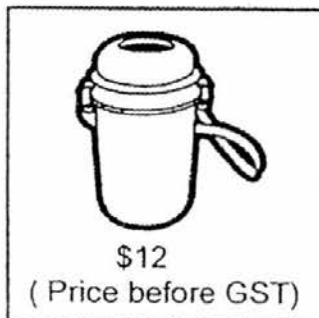
Ans: $ _____

28 The sum of 4 numbers is 1 390. One of the numbers is 400. What is the average of the remaining numbers?

Ans: _____

29 The figure below is made up of triangles. Five of them are shaded. Shade three more triangles so that XY is the line of symmetry of the figure.

X ——————————— Y

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30 Figure X is made up of nine similar equilateral triangles. Three triangles were removed from Figure X and the remaining triangles were rearranged to form Figure Y. The perimeter of Figure X is 270 cm. What is the perimeter of Figure Y?
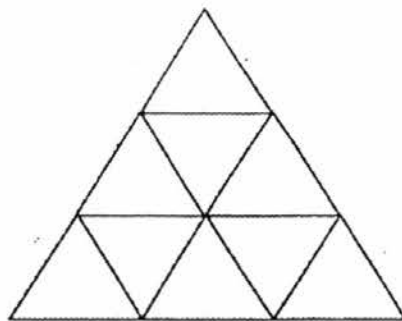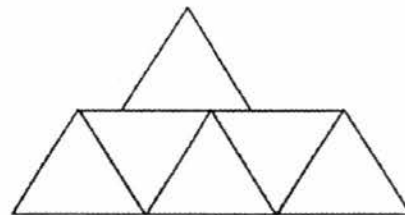

Figure X   Figure Y

Ans: _____ cm

END OF PAPER 1

11

RED SWASTIKA SCHOOL

2016 SEMESTRAL ASSESSMENT 2

MATHEMATICS
PAPER 2

Name : _____ (   )

Class : Primary 5 / _____

Date   : 26 October 2016

18 Questions
60 Marks
Duration of Paper 2: 1 hour 40 minutes

<u>Note:</u>
1. Do not open this Booklet until you are told to do so.
2. Read carefully the instructions given at the beginning of each part of the Booklet.
3. Do not waste time. If a question is difficult for you, go on to the next one.
4. Check your answers thoroughly and make sure you attempt every question.
5. In this paper, you should have the following:
   (a) Page <u>1</u> to Page <u>14</u>
   (b) Questions <u>1</u> to <u>18</u>
6. You are allowed to use a calculator.

MARKS

|	OBTAINED	POSSIBLE
PAPER 1		40
PAPER 2		60
TOTAL		100

Parent's Signature : _____

Questions 1 to 5 carry 2 marks each. Show your working clearly in the space below each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)
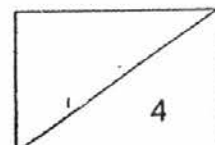
1   Muthu spent $\frac{1}{3}$ of his savings on a pair of soccer boots and $\frac{1}{4}$ of the remainder on a jersey. If he spent $49.90 on his jersey, what was his savings?

Ans: $ _____

2   Find the missing decimal in the box below.

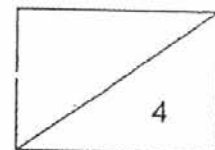3.5   ↑   3.7

?

Ans: _____

4

1
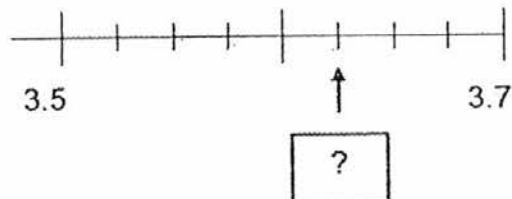
3   The students at a P5 camp are divided equally into Team A and Team B. The ratio of the number of boys to the number of girls in Team A and B are 1 : 2 and 5 : 4 respectively. What is the ratio of the number of boys to the number of girls at the camp?
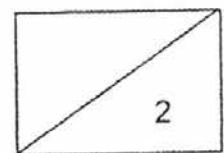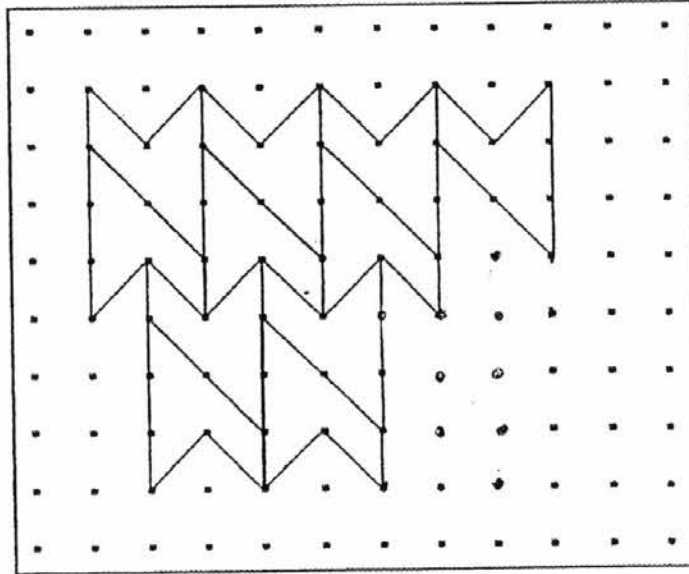
Ans: _____

4   Jack was 16 years old two years ago. He is thrice as old as Jill now. Find the total age of Jack and Jill two years from now. ·

Ans: _____

5   The pattern in the dot paper below shows part of a tessellation.
     Extend the tessellation by drawing **three more** unit shapes in the
   space provided in the dot paper.

3

For Questions 6 to 18, show your working clearly in the space below each question 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.

(50 marks)

6   Mrs Tan baked a 10-kg cake for a class party. Her students ate $\frac{3}{5}$ of it and she gave $1\frac{3}{5}$ kg to the other teachers. Find the mass of the cake she had left.
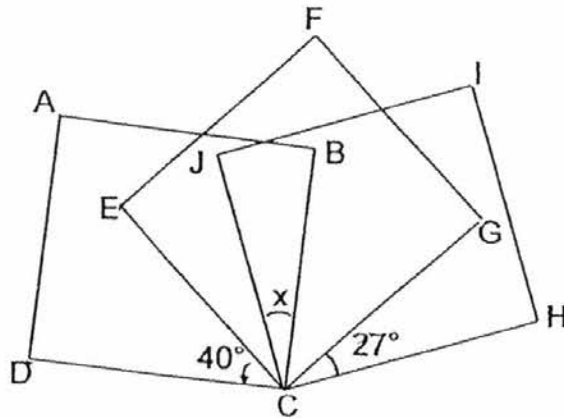
Ans: _____ [3]

7   William saved two coins every day from Monday to Sunday by putting them into a piggy bank. Each coin was either a 20-¢ or 50-¢ coin. The total value of the coins at the end of 4 weeks was $16.30. How many of the coins were 50-¢ coins?
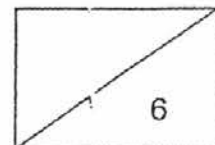
Ans: _____ [3]

6

4
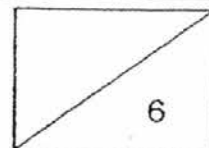
8   The figure below shows three identical squares ABCD, CEFG and
     CJIH. ∠DCE = 40° and ∠GCH = 27°. Find ∠x.
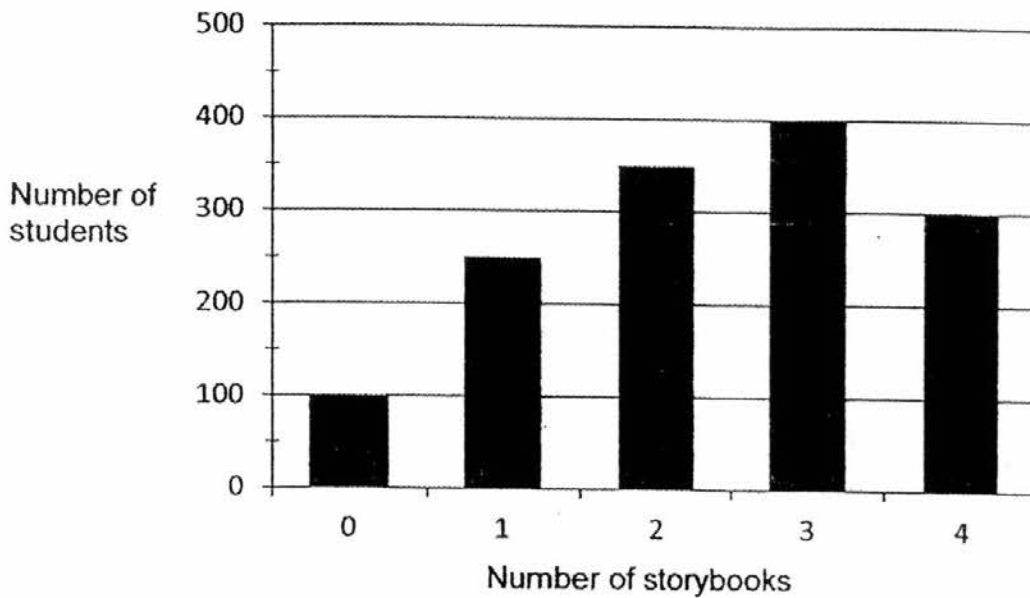

                                        Ans: _____ [3]

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9   The ratio of John's amount of money to Sean's is 7:11. If Sean gives
     $95 to John, they will have the same amount of money. How much
     money do they have altogether?
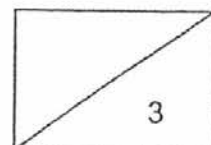
                                        Ans: _____ [3]

6

5

10   The bar graph shows the number of storybooks read by the students in a school.

(a)   How many students are there in the school?

(b)   What percentage of the students in the school read at least 1 storybook? (Give your answer correct to the nearest whole number.)
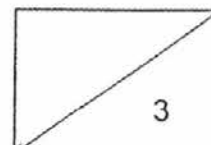
Ans: (a) _____ [1]

(b) _____ [2]

11 A list of 13 numbers has an average of 330. When two numbers are deleted from the list, the average of the remaining numbers is 313.

(a) What is the sum of 13 numbers?

(b) What are the two numbers that have been deleted given that the difference between the two numbers is 1?
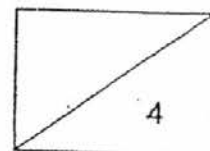
Ans: (a) _____ [1]

(b) _____ and _____ [2]

3

7

12 The usual price of a pen sold at Shop A and B is $20. During a sale, a discount of 20% is given to every pen sold at Shop A. At Shop B, a discount of 50% is given to the 3rd pen for every 3 pens sold. How much cheaper would it be if Lina buys 8 pens from Shop A instead of Shop B?

Ans: _____ [4]

4

13   Mdm Koh paid $30.60 for some mangoes and oranges. She bought 8 more oranges than mangoes. A mango cost $1.80 which was 4 times as much as an orange. How many mangoes did Mdm Koh buy?
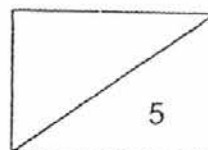
Ans: _____ [5]

5
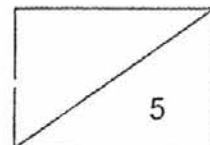
14   The figure shows a rectangular container with a square base of area 16 cm². The area of the shaded face is 36 cm².

(a)   What is the height of the container?

(b)   James filled a third of the container with water. Find the volume of the water.
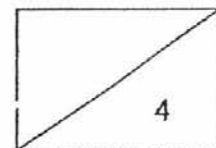

36 cm²

Ans: (a) _____ [3]

(b) _____ [2]

5

10
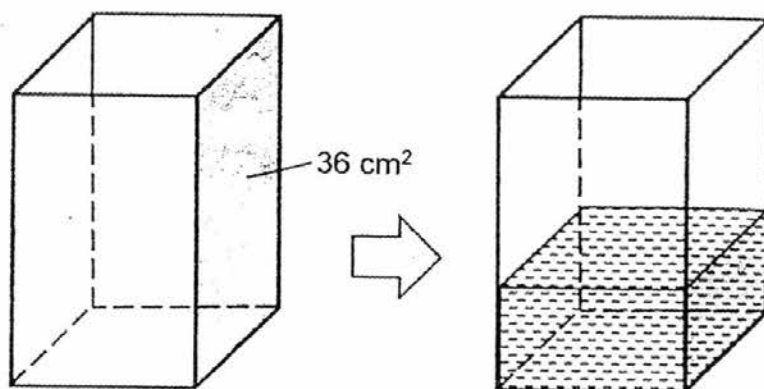
15 Mdm Ang used $\frac{4}{7}$ of her red buttons and $\frac{3}{5}$ of her blue buttons to sew a quilt. In the end, she had an equal number of red buttons and blue buttons left. Given that Mdm Ang had a total of 377 red and blue buttons at first, how many blue buttons did she use to sew the quilt?
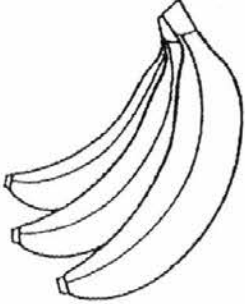
Ans: _____ [4]

11

16   The ratio of the number of pop idol cards Alice, Beth and Christine had was 3 : 5 : 2. Alice gave half of her cards to Beth. Beth in turn gave 45 cards to Christine. Christine then had 3 times the number of cards Alice had at the end of the game. How many cards did Beth have at the end of the game?

Ans: _____ [4]

4
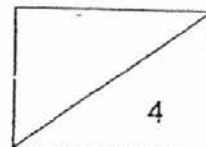
17 The prices of two fruits sold at a supermarket is shown below.

Grapes	Banana
2 kg for $12	3 kg for $10

(a) Mrs Tan bought an equal mass of grapes and bananas and spent $64 more on grapes than on bananas. What was the total mass of fruits that Mrs Tan bought?

(b) Mrs Devi spent an equal amount of money on grapes and bananas. In terms of their masses, what was the ratio of grapes to the ratio of bananas Mrs Devi bought?

Ans: (a) _____ [3]

(b) _____ [2]

5

13
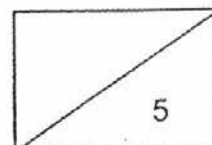
18   Mrs Shah bought an air purifier for $216 after a discount of 25%.

(a)   What was the price of the air purifier before discount?
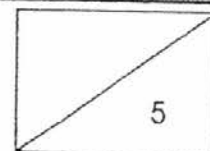
(b)   She paid $128 for a vacuum cleaner. The total discount for the air purifier and the vacuum cleaner was $104. What was the percentage discount given for the vacuum cleaner?

Ans: (a) _____ [1]

(b) _____ [4]

END OF PAPER 2

5

Paper 1

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

Q16   24

Q17 $6 \text{ m} \div 6 \Rightarrow \underline{1 \text{ m}}$

Q18   0.07

Q19   0.497

Q20   2:05 pm

Q21   64 cm²

Q22 $60 + 80 \rightarrow 140$
             $360 - 140 \Rightarrow \underline{220°}$

Q23 $0.325 \times 2 = 0.65$
             $0.75 \times 2 = 1.5$
             $1.5 + 0.65 + 1.5 \Rightarrow \underline{3.65 \ \ell}$

Q24   Area ACE $\rightarrow \frac{1}{2} \times 3 \times 4 = 6$ cm²
             Area rec ACDF $\rightarrow 6 \times 2 = 12$ cm²
             AF $\rightarrow 12 \div 5 \Rightarrow \underline{2.4 \text{ cm}}$
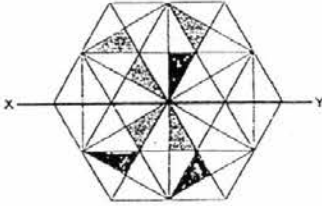
Q25   Total $\rightarrow 5 \times 4 \times 3 = 60$
             Diff $\rightarrow 60 - 16 \Rightarrow \underline{44 \text{ cubes}}$

Q26 $\frac{1}{5} \rightarrow 76 \div 2 = 38$
             $\frac{5}{8} \rightarrow 38 \times 5 = 190$
             $190 \div 2 \Rightarrow \underline{95}$

Q27   Price $\rightarrow 12 + 0.84 \Rightarrow \underline{\$12.84}$

Q28
$$1390 - 400 \rightarrow 990$$
$$990 \div 3 \Rightarrow \underline{330}$$

Q29

Q30
1 side → $270 \div 9 = 30$
8 sides → $30 \times 8 \Rightarrow \underline{240\ cm}$

Paper 2

Q1
1u → \$49.90
6u → $6 \times \$49.90 \Rightarrow \underline{\$299.40}$

Q2
Diff → $3.7 - 3.5 = 0.2$
1 spacing → $0.2 \div 8 = 0.025$
5 spacings → $0.025 \times 5 = 0.125$
No. → $3.5 + 0.125 \Rightarrow \underline{3.625}$

Q3

Team A	Team B
B : G : T	B : G : T
(1 : 2 : 3) x 3	5 : 4 : 9
→ 3 : 6 : 9	

	B	:	G
	3 + 5	:	6 + 4
	8	:	10
⇒	4	:	5

Q4
Now Jack → $16 + 2 = 18$
Now Jill → $18 \div 3 = 6$
2 yrs later:
Jack $18 + 2 = 20$
Jill → $6 + 2 = 8$
Total → $20 + 8 \Rightarrow \underline{28\ years\ old}$

Q5
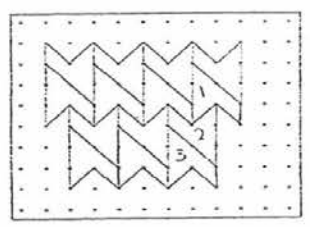
Q6	Eaten → $\frac{3}{5}$ x 10 = 6 kg
	Left → 10 − 6 − $1\frac{3}{5}$ kg ⇒ $2\frac{2}{5}$ kg
Q7	17
Q8	∠BCE → 90° − 40° = 50°
	∠JCG → 90° − 27° = 63°
	∠X → 50° + 63° − 90° ⇒ <u>23°</u>
Q9.	\$95 → 9u − 7u = 2u
	1u → 95 ÷ 2 = \$47.50
	18u → \$47.50 x 18 ⇒ <u>\$855</u>
Q10a	100 + 250 + 350 + 400 + 300 ⇒ <u>1400 students</u>
Q10b	No. students → 1400 − 100 = 1300
	$\frac{1300}{1400}$ x 100 % ≈ <u>93 %</u>
Q11a	330 x 13 ⇒ <u>4290</u>
Q11b	13 − 2 = 11
	313 x 11 = 3443
	Sums (deleted) → 4290 − 3443 = 847
	847 − 1 = 846
	846 ÷ 2 = 423
	1ˢᵗ no. → 423
	2ⁿᵈ no. → 423 + 1 = 424
	Ans: <u>423 and 424</u>
Q12	Shop A → Cost 8 pens
	$\frac{80}{100}$ x 20 x 8 = \$128
	Shop B → 3ʳᵈ pen
	$\frac{50}{100}$ x 20 = \$10
	8 pens → (20 + 20 + 10) + (20 + 20 + 10) + 20 + 20 = \$140
	Diff → 140 − 128 ⇒ <u>\$12</u>
Q13	1 orange → 1.80 ÷ 4 = \$0.45
	8 oranges → 0.45 x 8 = \$3.60
	Cost → (equal no. fruits) \$30.60 − \$3.60 = \$27
	Cost → (1 orange + 1 mango) \$1.80 + \$0.45 = \$2.25
	27 ÷ 2.25 ⇒ <u>12 mangoes</u>

3

Q14a	Length of base → $\sqrt{16}$ = 4 cm Height of container → 34 ÷ 4 ≈ <u>9 cm</u>
Q14b	Volume water → $\frac{1}{3}$ x 4 x 4 x 9 ⇒ <u>48 cm³</u>
Q15	Red → 14 units Blue → 15 units Total → 14 + 15 = 29 units 1u → 377 ÷ 29 = 13 13 x 9 ⇒ <u>117 blue buttons</u>

Q16	At first A : B : C : T
	           (3 : 5 : 2 : 10) x 2
	     = 6 : 10 : 4 : 20
	Alice give A : B : C : T
	(3u) 3 : 13 : 4 : 20
	End A : B : C : T
	          3 : 8 : 9 : 20
	Beth → 20 – 3 – 9 = 8u
	1u → 45 ÷ 5 = 9
	5u → 45
	8u → 9 x 8 ⇒ <u>72 cards</u>

Q17a	Cost 6 kg grapes → 3 x 12 = $36 Cost 6 kg bananas → 2 x 10 = $20 Diff → 36 - 20 = $16 No. sets → 64 ÷ 16 = 4 Mass fruits → (6 + 6) x 4 ⇒ <u>48 kg</u>

Q17b	Amount of grapes → (60 ÷ 12) x 2 = 10 kg
	Amount of bananas → (60 ÷ 10) x 3 = 18 kg
	              G : B
	            10 : 18
	Ratio ⇒ <u>5 : 9</u>

Q18a	100 % - 28 % = 75 % 75 % → 216 1 % → 216 ÷ 75 = 2.88 100 % → 2.88 x 100 ⇒ <u>$288</u>
Q18b	Discount (purifier) → 288 – 216 = $72 Discount (vacuum) → 128 + 32 = $160 % discount → $\frac{32}{160}$ x 100 % ⇒ <u>20 %</u>

<p align="center">End</p>