SEMESTRAL ASSESSMENT 2

PRIMARY 5
MATHEMATICS PAPER 1
(BOOKLET A)

25 OCT 2016

Name: _____

Form Class / Register No. : 5L_____ / _____

Banded Class / Register No. : 5M_____ / _____

Total time for Booklets A and B: 50min

INSTRUCTIONS TO CANDIDATES

1. Write your Name, Class and Register No. in the spaces provided above.
2. DO NOT turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answers on the Optical Answer Sheet (OAS) provided.
6. The use of calculator is **NOT ALLOWED**.

This booklet consists of 5 printed pages, excluding the cover page.

Paper 1 (Booklet A)

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 oval (1, 2, 3 or 4) on the Optical Answer Sheet.

You are <u>not</u> allowed to use a calculator. (20 marks)

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1 Round off 789 549 to the nearest thousand.

(1) 789 000

(2) 789 550

(3) 790 000

(4) 800 000 ( )

2 In the number 89.76, which digit is in the tenths place?

(1) 6

(2) 7

(3) 8

(4) 9 ( )

3 Find the sum of $\frac{1}{2}$ and $\frac{1}{3}$.

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

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

(3) $\frac{5}{6}$

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

4 Find the value of $\frac{1}{3} \div 6$

(1) 18

(2) 2

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

(4) $\frac{1}{18}$ ( )

5 The ratio of the cost of a guitar to the cost of a piano is 1 : 10. If the cost of the guitar is $200, what is the cost of the piano?

(1) $20

(2) $220

(3) $2000

(4) $2200 ( )

6 The height of Jason is 100 cm and the height of Irene is 120 cm. Find the ratio of Jason's height to Irene's height in the simplest form.

(1) 5 : 6

(2) 6 : 5

(3) 10 : 12

(4) 12 : 10 ( )

7 Express $\frac{2}{5}$ as a decimal

(1) 0.2

(2) 0.25

(3) 0.4

(4) 2.5 ( )

8 What is the value of 0.03×200?

(1) 0.6

(2) 6

(3) 60

(4) 600 ( )

9 25% of the pupils in a class are boys. If there are 8 pupils in the class, how many girls are there in the class?

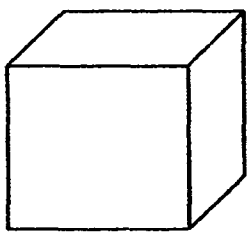
(1) 6

(2) 2

(3) 24

(4) 32 ( )

10 The figure below shows a cube with side of 7 cm.



Which one of the following is the volume of the cube?

(1) $7\ cm^3$

(2) $21\ cm^3$

(3) $49\ cm^3$

(4) $343\ cm^3$ ( )

11 Find the value of $2 + (3 + 4) \times 6 - 4 \div 2$.

(1) 19

(2) 25

(3) 42

(4) 52 ( )

12 There are 160 cars and 240 vans at a car park. What fraction of the vehicles at the car park are vans?

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

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

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

(4) $\frac{3}{5}$ ( )

13 The ratio of fiction books to non-fiction books on a shelf was 5 : 2. After 40 non-fiction books were added, the ratio of the number of fiction books to the non-fiction books on the shelf became 1 : 2. How many non-fiction books were there in the end?

(1) 10

(2) 20

(3) 25

(4) 50 ( )

14 The mass of Box A and Box B is 0.6 kg. The mass of Box A and Box C is 1.3 kg. Box C is 3 times as heavy as Box B. Find the mass of Box A.

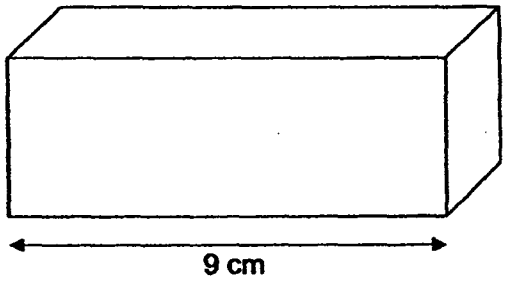
(1) 0.25 kg

(2) 0.29 kg

(3) 0.30 kg

(4) 0.35 kg

15 The figure below shows a rectangular cuboid. The volume of the cuboid is 108 cm^3 and its length is 9 cm.



Which one of the followings are the possible breadth and height of the cuboid?

	Breadth	Height
(1)	3 cm	3 cm
(2)	3 cm	4 cm
(3)	6 cm	6 cm
(4)	9 cm	9 cm

-- End of Booklet A --

SEMESTRAL ASSESSMENT 2

PRIMARY 5
MATHEMATICS PAPER 1
(BOOKLET B)

25 OCT 2016

Parent's signature

Name : _____

Form Class / Register No. : 5L_____ / _____

Banded Class / Register No. : 5M_____ / _____

Total time for Booklets A and B: 50min

INSTRUCTIONS TO CANDIDATES

1. Write your Name, Class and Register No. in the spaces provided above.
2. DO NOT turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Write all your answers in this booklet.
6. The use of calculator is **NOT ALLOWED**.

Marks (Booklet A) :	20
Marks (Booklet B) :	20
Total Marks (Booklets A and B) :	40

This booklet consists of 6 printed pages, excluding the cover page.

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)**

Do not write in this space.

16 What is two million, six thousand and nine in numeral?

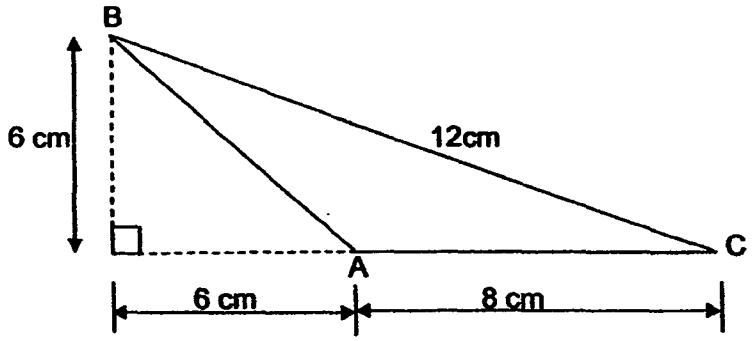
Ans:

17 John took 3 h to paint $\frac{4}{5}$ of a room.

How long would he take to paint $\frac{1}{5}$ of the same room?

Ans:_____h

18 Find the area of the triangle ABC.



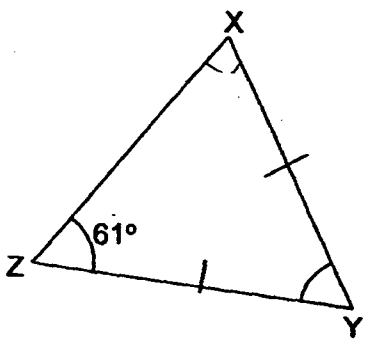
Ans:_____cm^2

19 The cost of a drum is twice the cost of 2 flutes.
Find the ratio of the cost of a drum to the cost of a flute.

Do not write in this space.

Ans: _____

20 The figure below shows an isoceles triangle XYZ.
Given $\angle XZY = 61°$, find $\angle XYZ$.



Ans: _____ °

21 1.02 l = _____ ml

Ans: _____ ml

22 Express $\frac{4}{5}$ as a percentage.

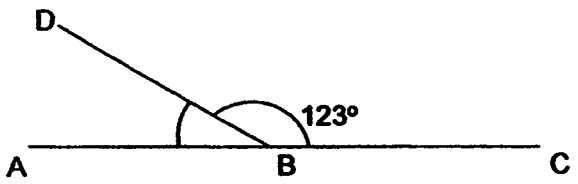
Do not write in this space.

Ans: _____ %

23 The mass of a papaya is 350 g and the mass of 2 kiwi fruits is 250 g. Find the average mass of the 3 fruits.

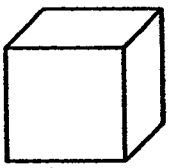
Ans: _____ g

24 ABC is a straight line and ∠ DBC = 123°.
Find ∠ ABD.



Ans: _____ °

25 Find the length of the cube if the area of one of its faces is 400 cm².



Ans: _____ cm.

Questions **26** to **30** carry 2 marks each. Show your working clearly and write your answers the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space.

26 Tom has \$420 more than Jerry at first. For every \$2 Tom saves, Jerry saves \$5. Find the amount of money Jerry has saved when Jerry and Tom have the same amount of money.

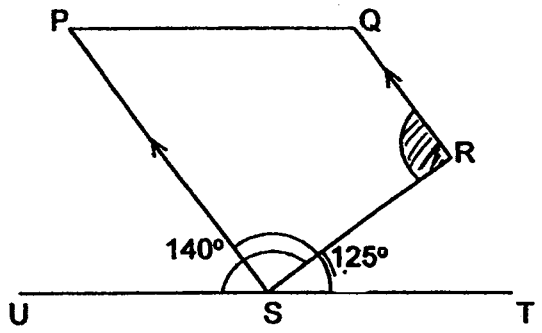
Ans: \$_____

27 Alvin spent \$28 more than $\frac{2}{5}$ of his money on books. He was left with \$44. How much did Alvin have at first?

Ans: \$_____

28 Given PS is parallel to QR, ∠USR = 140° and ∠PST is 125°, find ∠SRQ.

Do not write in this space.



Ans: _____°

29 The length of a rectangular field is 110.6 m. Its breadth is 20.75 m shorter than its length. Find the distance covered by Johnny if he walks around the whole field once.

Ans: _____m

Do not write in this space.

30 Gabriel spent 40% of his money on a school bag. He spent $\frac{2}{5}$ of the remainder on some stationeries. What percentage of his money was left?

Ans: _____ %

END OF PAPER 1

SEMESTRAL ASSESSMENT 2

PRIMARY 5
MATHEMATICS
PAPER 2

25 OCT 2016

Parent's signature

Name: _____

Form Class / Register No. : 5L_____ / _____

Banded Class / Register No. : 5M_____ / _____

Total time: 1h 40min

INSTRUCTIONS TO CANDIDATES

1. Write your Name, Class and Register No. in the spaces provided above.
2. DO NOT turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Write all your answers in this booklet.
6. The use of an approved calculator is expected, where appropriate.

Paper 1 :	40
Paper 2 :	60
Total Marks :	100

This booklet consists of 15 printed pages, excluding the cover page.

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 answer in the units stated. (10 marks)

Do not write in this space

1 The ratio of the number of boys to the number of girls in a class was 1 : 1. After 3 boys were transferred out of the class to another school, the ratio of the number of boys to the number of girls became 4 : 5. How many children were there in the class at first?

Ans: _____

2 Can drinks are sold in packs of 3 and each pack costs $2.50. Find the most number of can drinks that can be bought with a $10 note if the can drinks are sold at a discount of 20%.

$2.50 for 3

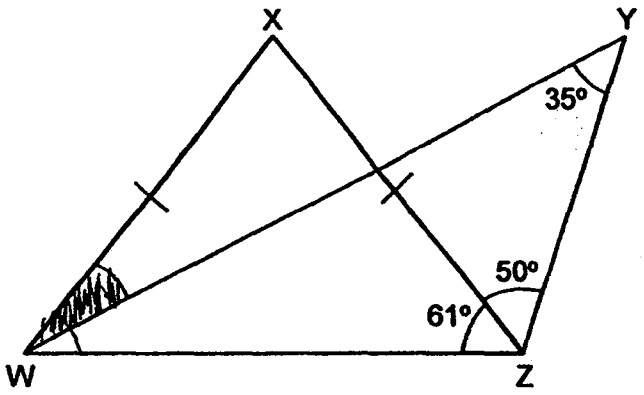
Ans: _____

3 The average height of Jane, Ian and Kelvin is 120 cm. Jane is 100 cm tall and Ian is 123 cm tall. Find the height of Kelvin.

Do not write in this space

Ans: _____ cm

4 The figure below is made up of two triangles, WXZ and WYZ.
WX = XZ, ∠WZX = 61°, ∠XZY = 50° and ∠WYZ = 35°
Find ∠XWY.



Ans: _____ °

5 The capacity of a jug is twice the amount of apple juice in it. The apple juice is emptied and poured into 5 identical cups. The cups were fully filled to its brim and the capacity of each cup is 250 ml. Find the capacity of the jug in ml.

Do not write in this space

Ans: _____ ml

For questions **6** to **18**, 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. (50 marks)

Do not write in this space

6 Adam has \$135 less than Brian and Brian has \$190 more than Celine. Adam and Celine have a total of \$111.50. How much does Celine have?

Ans:_____ [3]

7 $\frac{3}{4}$ of Dylan's savings is equal to $\frac{2}{3}$ of Eric's savings. Dylan and Eric save a total of \$408. Find Dylan's savings.

Ans: _____ [3]

8 The ratio of the number of apples to the number of papayas is 2 : 3. The ratio of the number of papayas to the number of oranges is 2 : 3. There are a total of 3420 fruits. How many apples are there?

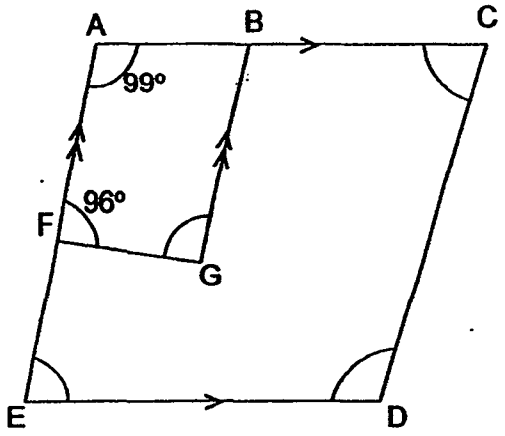
Do not write in this space

Ans: _____ [3]

9 In the figure below, AC is parallel to ED and AF is parallel to BG. AFE is a straight line, ∠AFG = 96°, ∠FAB = 99° and the sum of ∠BCD and ∠DEF is 150°.

(a) Find ∠FGB.
(b) Find ∠EDC.

Do not write in this space

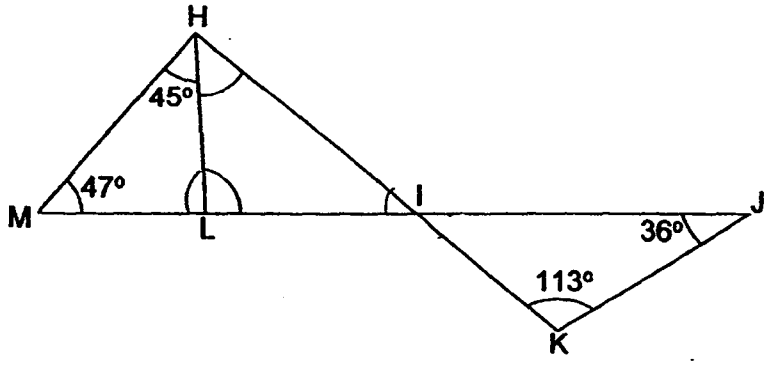


Ans: (a) _____ [1]

(b) _____ [2]

10 In the figure below, HIK and MLIJ are straight lines.
$\angle HML = 47°$, $\angle MHL = 45°$, $\angle IJK = 36°$ and $\angle IKJ = 113°$.

(a) Find $\angle HLI$.
(b) Find $\angle LHI$.

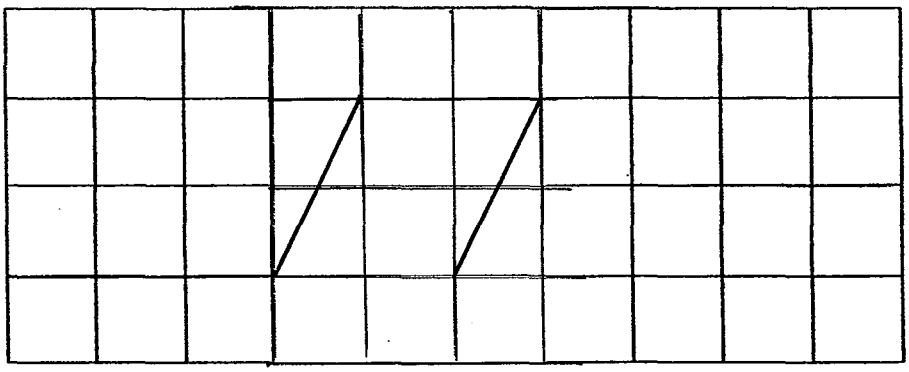


Ans: (a)_____ [1]

(b)_____ [2]

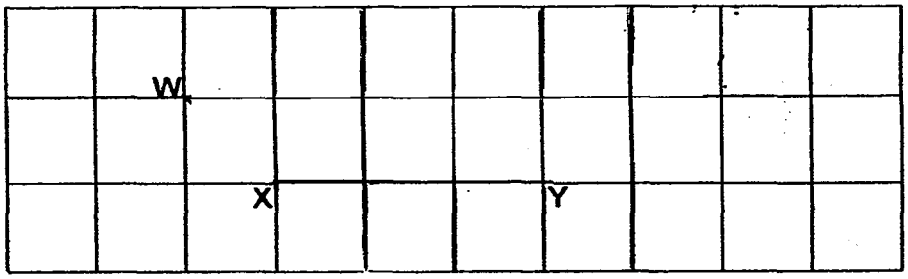
11 In the square grid below, a parallelogram has been drawn.

Do not write in this space



(a) In another similar square grid below, draw and label a trapezium WXYZ which has the same area as the parallelogram above.

[2]

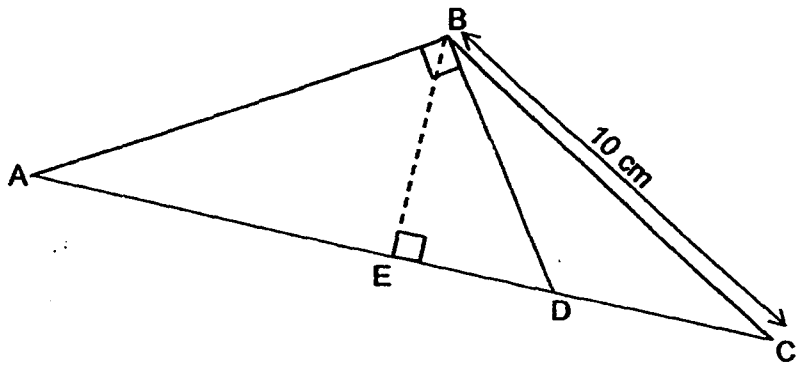


(b) Measure and write down the value of ∠WXY.

Ans: (b) _____ [1]

12 The figure below shows a triangle ABC. The ratio of the length AB to the length BD to the length BC is 4 : 3 : 5. The length BC is 10 cm.

Do not write in this space



(a) Find the area of triangle ABD.

(b) In triangle BCD, if BE is the height, which is the base?

Ans: (a)_____ [3]

(b)_____ [1]

13 The mass of 10 cherries in a basket is 0.5 kg. The mass of 35 cherries in an identical basket is 1.05 kg

(a) Find the exact mass of a cherry in grams.

(b) Find the mass of the empty basket in grams.

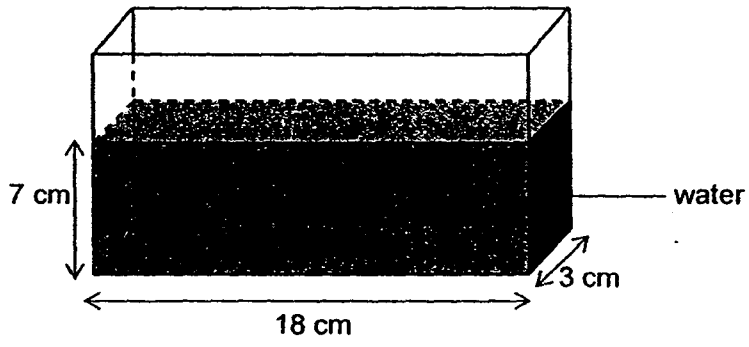
Do not write in this space

Ans: (a)_____ [2]

(b)_____ [2]

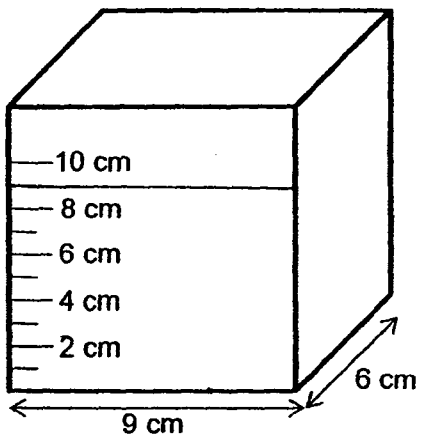
14 The figure below shows a rectangular container. It is $\frac{3}{5}$ filled with water. The length of the container is 18 cm and its breadth is 3 cm.

Do not write in this space



(a) Find the capacity of the container in litres.

(b) All the water in the rectangular container is poured into another container as shown below. Draw a line on the container to represent the water level of the amount of water in it. [2]



Ans: (a)_____ [2]

15 The number of red balls is twice the number of blue balls. The number of blue balls is 10 more than the number of green balls. The total number of balls is 142. The cost of each red ball is $2.50 and the cost of each green ball is $1.50. The total cost of all the balls is $251.

(a) Find the number of green balls.

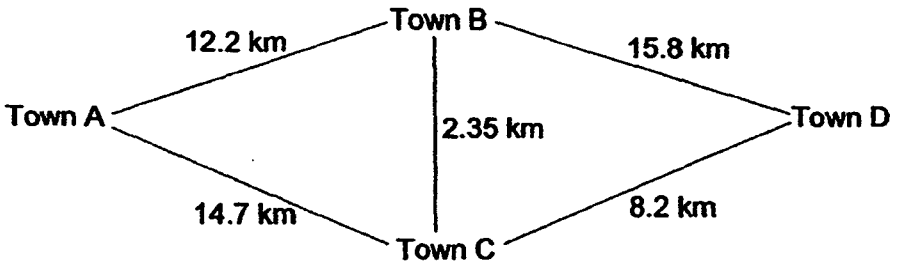
(b) Find the cost of a blue ball.

Ans: (a)_____ [2]

(b)_____ [3]

16 The diagram below, not drawn to scale, shows the distances between 4 towns.

Do not write in this space



(a) Ethan travels from Town A to Town B and then to Town D. Find the distance he has travelled in metres.

(b) The cost of petrol consumption for every km travelled is 60 cents. Find the cost of the petrol consumption to travel from Town B to Town C.

(c) Find the shortest distance to travel from Town A to Town D. Leave your answer in km and m.

Ans: (a)_____ [1]

(b)_____ [2]

(c)_____ [2]

17 The number of cows in a farm was 60% of the number of goats. After 80 goats were taken out of the farm, the number of goats became 60% of the number of cows in the farm.

Do not write in this space

(a) How many cows were there in the farm?

(b) What percentage of the goats were moved out of the farm?

Ans: (a)_____ [3]

(b)_____ [2]

18 Sam runs 100 metres for 5 times. The average time taken for his first three runs is 14.5 seconds. He aims to have an average timing of 12.8 seconds for his five runs.

Do not write in this space

(a) What is the average time he needs to take for his 4^{th} and 5^{th} run in order to achieve his aim?

(b) If he runs 3 seconds faster in one of the five runs, what would be his average time for the five runs?

Ans: (a)_____ [3]

(b)_____ [2]

- End of Paper 2 -

ANSWER KEY

YEAR : 2016
LEVEL : PRIMARY 5
SCHOOL : PEI HWA PRESBYTERIAN PRIMARY
SUBJECT : MATHEMATICS
TERM : SA2

Paper 1

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

Q16 2 006 009

Q17 $\frac{3}{4}$ h

Q18 24 cm^2

Q19 4 : 1

Q20 61° x 2 → 122°
180° - 122° ⇒ <u>58°</u>

Q21 1020 ml

Q22 80 %

Q23 350 + 250 → 600
600 ÷ 3 ⇒ <u>200 g</u>

Q24 57°

Q25 20 cm

Q26 Diff → 5 – 2 = 3
420 ÷ 3 = 140
140 x 5 ⇒ <u>$700</u>

Q27 $\frac{5}{5}$ Total

↙ ↘

books left

$\frac{2}{5}$ + \$28 $\frac{3}{5}$ - \$28 (\$44)

$\frac{3}{5}$ of M → 44 + 28 = 72

$\frac{1}{5}$ of M → 72 ÷ 3 = 24

$\frac{5}{5}$ of M → 24 x 5 ⇒ <u>\$120</u>

Q28 ∠RST → 180° - 140° = 40°

∠PSR → 125° - 40° = 85°

∠SRQ → 180° - 85° ⇒ <u>95°</u>

Q29 B → 110.6 – 20.75 = 89.85

2B → 89.85 + 89.85 = 179.70

2L → 110.6 + 110.6 = 221.20

Total → 221.20 + 179.70 ⇒ <u>400.90 m</u>

Q30 $\frac{2}{5} \times \frac{3}{5} = \frac{6}{25}$ (stationeries)

$\frac{25}{25} - \frac{10}{25} - \frac{6}{25} = \frac{9}{25}$

$\frac{9 \times 4}{25 \times 4} \rightarrow \frac{36}{100} \Rightarrow$ <u>36 %</u>

<u>Paper 2</u>

Q1 1u → 3

5u + 5u = 10u

10u → 10 x 3 ⇒ <u>30 children</u>

Q2 $\frac{20}{100}$ x 2.5 = 0.5

2.5 – 0.5 = 2.0

10 ÷ 2 = 5

5 x 3 ⇒ <u>15 can drinks</u>

Q3 Total height → 120 x 3 = 360

Kelvin → 360 – 100 – 123 ⇒ <u>137 cm</u>

Q4 61° + 50° = 111°

∠ZWY → 180° - 111° - 35° = 34°

∠XWY → 61° - 34° ⇒ <u>27°</u>

Q5 Total capacity of 5 cups → 250 x 5 = 1250
Capacity of jug → 1250 x 2 ⇒ <u>2500 ml</u>

Q6 190 – 135 = 55
2u → 111.50 – 55 = 56.50
1u → 56.50 ÷ 2 ⇒ <u>$28.25</u>

Q7 $\frac{3 \times 2}{4 \times 2}$ of D → $\frac{2 \times 3}{3 \times 3}$ of E
$\frac{6}{8}$ of D → $\frac{6}{9}$ of E
8u + 9u = 17u
17u → 408
1u → 408 ÷ 17 = 24
8u → 24 x 8 ⇒ <u>$192</u>

Q8 Apple : Papaya & Papaya : Orange
2 : 3 2 : 3
x2 x3
4u : 6u 6u : 9u
A P O
Total: 4u 6u 9u → 19u
19u → 3420
1u → 3420 ÷ 19 = 180
4u → 180 x 4 ⇒ <u>720 apples</u>

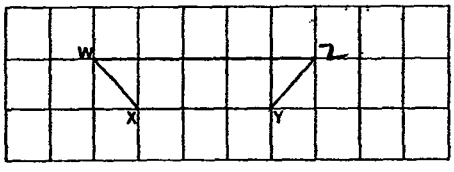
Q9a ∠FGB → 180° - 96° ⇒ <u>84°</u>

Q9b ∠EDC → 360° - 99° - 150° ⇒ <u>111°</u>

Q10a ∠MLH → 180° - 47° - 45° = 88°
∠HLI → 180° - 88° = <u>92°</u>

Q10b ∠KIJ → 180° - 113° - 36° = 31°
∠LHI → 180° - 92° - 31° ⇒ <u>57°</u>

Q11a



Q11b ∠WXY ⇒ <u>136°</u>

Q12a $5u \rightarrow 10$
$1u \rightarrow 10 \div 5 = 2$
$3u \rightarrow 2 \times 3 = 6$ (BD)
$AB \rightarrow 2 \times 4 = 8$
$\angle ABD \rightarrow \frac{1}{2} \times 8 \times 6 \Rightarrow \underline{24\ cm^2}$

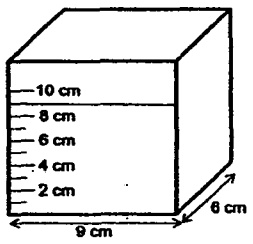
Q12b Base $\Rightarrow$ <u>DC</u>

Q13a $25C \rightarrow 1.05 - 0.5 = 0.55$
$1C \rightarrow 0.55 \div 25 = 0.022\ kg \Rightarrow \underline{22\ g}$

Q13b $10C \rightarrow 0.022 \times 10 = 0.22$
$B \rightarrow 0.5 - 0.22 = 0.28\ kg \Rightarrow \underline{280\ g}$

Q14a $\frac{3}{5}$ of $T \rightarrow 18 \times 3 \times 7 = 378$
$\frac{1}{5}$ of $T \rightarrow 378 \div 3 = 126$
Vol : $\frac{5}{5}$ of $T \rightarrow 126 \times 5 = 630\ ml \Rightarrow \underline{0.63\ \ell}$

Q14b



Q15a $4u \rightarrow 142 - 30 = 112$
$1u \rightarrow 112 \div 4 \Rightarrow \underline{28\ green\ balls}$

Q15b Total no. of blue balls $\rightarrow 28 + 10 = 38$
Total no. of red balls $\rightarrow 28 + 28 + 20 = 76$
Total price of red balls $\rightarrow 76 \times 2.50 = 190$
Total price of green balls $\rightarrow 28 \times 1.50 = 42$
$190 + 42 = 232$
$251 - 232 = 19$
Cost of 1 blue ball $\rightarrow 19 \div 38 \Rightarrow \underline{\$0.50}$

Q16a $12.2 + 15.8 \rightarrow 28$
$28\ km \Rightarrow \underline{28000\ m}$

Q16b $2.35 \times 0.6 \Rightarrow \underline{\$1.41}$

Q16c Shortest distance $\rightarrow 12.2 + 2.35 + 8.2 = 22.75\ km \Rightarrow \underline{22km\ 750m}$

Q17a

AF	Chg	End
C : G	G-18	C : G
3 : 5		5 : 3
x 5		x 3
15u : 25u		15u : 9u

16u

16u → 80

1u → 80 ÷ 16 = 5

15u → 15 x 5 ⇒ <u>75 cows</u>

Q17b 25u → 25 x 5 = 125

$\frac{80}{125}$ x 100 % ⇒ <u>64 %</u>

Q18a First three runs → 14.5 x 3 = 43.5

Five runs → 12.8 x 5 = 64

Total time for 4th & 5th run → 64 – 43.5 = 20.5

Average time → 20.5 ÷ 2 ⇒ <u>10.25 seconds</u>

Q18b 64 – 3 → 61

Average time → 61 ÷ 5 ⇒ <u>12.2 seconds</u>

End