Index No. | | | | | | – | |

SINGAPORE CHINESE GIRLS' SCHOOL

PRELIMINARY EXAMINATION 2013

PRIMARY 6

MATHEMATICS
PAPER 1

BOOKLET A

Name : ( )

Class : Primary 6 SY / C / G / SE / P

20 August 2013

		Marks attained	Max Mark
Paper 1	Booklet A		20
	Booklet B		20
Paper 2			60
Total Marks			100

Parent's Signature

15 Questions
20 Marks

Total Time for Booklets A and B: 50 min

INSTRUCTIONS TO CANDIDATES

Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.
You are not allowed to use a calculator

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 correct oval (1, 2, 3 or 4) on the Optical Answer Sheet. **(20 marks)**

---

1. What is the value of the digit 3 in 284.03?

   (1) 3 tens
   (2) 3 tenths
   (3) 3 hundreds
   (4) 3 hundredths

2. Round off 596 481 to the nearest ten thousands.

   (1) 500 000
   (2) 590 000
   (3) 600 000
   (4) 610 000

3. Which of the following numbers has the greatest value?

   (1) 1.7
   (2) 1.72
   (3) 1.702
   (4) 1.724

4. Find the value of 8 + (8 + 20) : 4 - 2 + 9.

   (1) 4
   (2) 16
   (3) 22
   (4) 27

5. Express 12 seconds as a percentage of 2 minutes.

   (1) 6%
   (2) 10%
   (3) 12%
   (4) 20%

6. A meeting started at 9.35 a.m. and ended at 11.15 a.m. How long did the meeting last?

(1) 1 h 10 min
(2) 1 h 40 min
(3) 2 h 10 min
(4) 2 h 40 min

7. What is the value of the number that is represented on the place value table below?

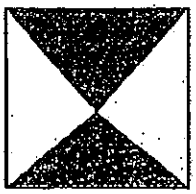
Ten Thousands	Thousands	Hundreds	Tens	Ones
● ●	● ● ●	● ● ● ● ● ● ● ● ●	●	● ● ● ●

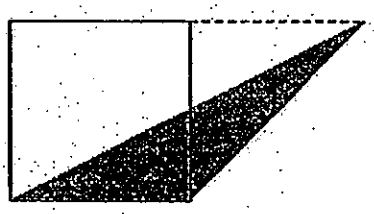
(1) 23 112
(2) 24 014
(3) 231 014
(4) 241 014

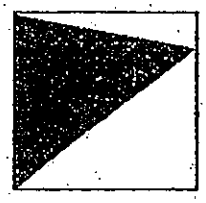
8. Josh had \$360 left after spending $\frac{1}{6}$ of his money to buy a chair. How much did he spend on the chair?

(1) \$60
(2) \$72
(3) \$300
(4) \$432

9. The squares shown below are identical. Which one of the following shaded areas is the largest?

(1) 

(2) 

(3) 

(4) 

10. Raju had 7 kg of baking dough. He cut it equally into smaller portions, each weighing $\frac{5}{6}$ kg, and had some left. How much dough had he left?

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

(2) $\frac{1}{6}$ kg

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

(4) $\frac{5}{6}$ kg

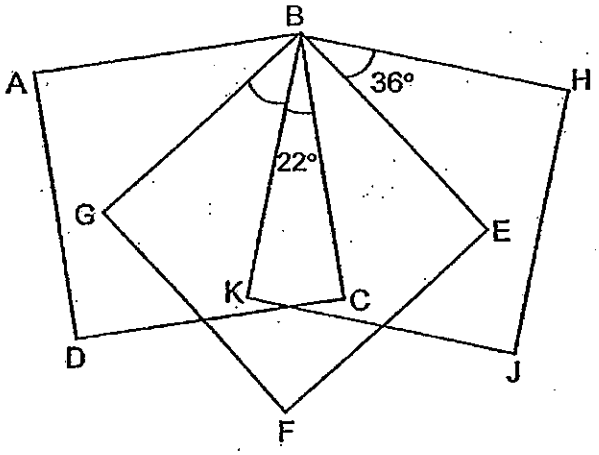
11. The figure shows three identical squares ABCD, BEFG and HJKB. What is the value of ∠GBK?

(1) 32°

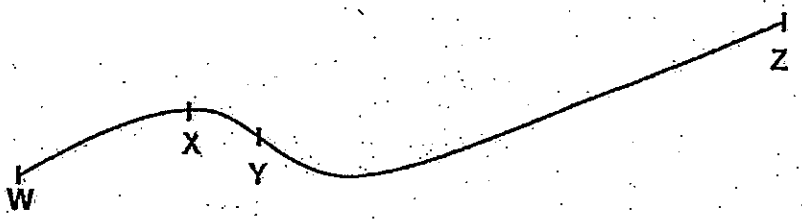
(2) 36°

(3) 54°

(4) 58°



12. W, X, Y and Z have been marked on a piece of string as shown below. The ratio of the length of WX to the length of XY is 2 : 1. The ratio of the length of WY to the length of YZ is 2 : 5. What is the ratio of the length of XY to that of YZ?



(1) 1 : 3
(2) 1 : 5
(3) 2 : 11
(4) 2 : 15

13. 5 umbrellas and 5 purses cost $100. Each umbrella cost 50% more than each purse. What is the cost of each umbrella?

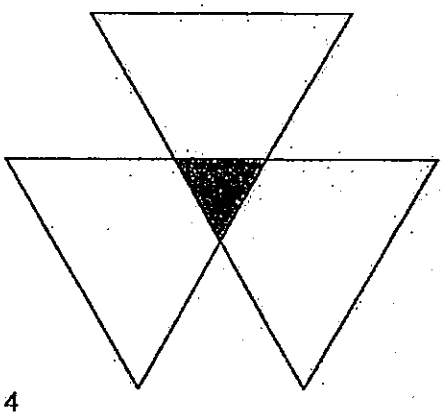
(1) $8
(2) $10
(3) $12
(4) $15

14. Lynn sold $\frac{1}{3}$ of her cupcakes on Saturday and $\frac{3}{5}$ of the remainder on Sunday. If she sold 40 more cupcakes on Sunday than on Saturday, how many cupcakes did she sell altogether?

(1) 140
(2) 240
(3) 440
(4) 600

15. The figure below shows 3 overlapping identical triangles. If the area of each big triangle is 80 cm^2 and the area of the figure is 210 cm^2, find the area of the shaded triangle.

(1) 10 cm^2
(2) 15 cm^2
(3) 30 cm^2
(4) 45 cm^2



Index No. | | | | | | | – | |

SINGAPORE CHINESE GIRLS' SCHOOL

PRELIMINARY EXAMINATION 2013

PRIMARY 6

MATHEMATICS
PAPER 1

BOOKLET B

Name : _____ ( )

Class : Primary 6 SY / C / G / SE / P

20 August 2013

Paper 1	Mark attained	Max Mark
Booklet B		20

15 Questions

20 Marks

Total Time for Booklets A and B: 50 min

INSTRUCTIONS TO CANDIDATES
Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.
You are not allowed to use a calculator

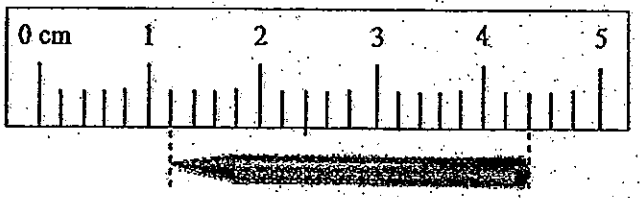
Booklet B

Name:_____( ) Class: P6 SY / C / G / SE / P

Do not write in this column

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 length of the pencil as shown in the diagram below?



Ans:_____cm

17. 11 – ☐ = 9.27

What is the missing number in the box?

Ans:_____

18. 57 ÷ 1 000 = _____ ÷ 10.

Ans:_____

3

19. Express $\frac{5}{8}$ as a decimal correct to 2 decimal places.

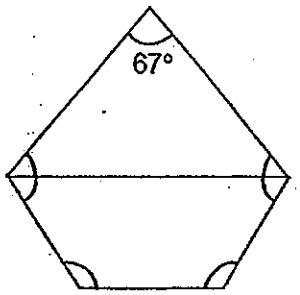
Do not write in this column

Ans: _____

20. Out of 60 pupils who participated in a bowling competition, 24 of them were boys. What is the ratio of the number of boys to the number of girls who participated in the competition? (Express your answer in the simplest form)

Ans: _____

21. The figure below is made up of a triangle and a trapezium. Find the sum of all the **unknown** marked angles in the figure.

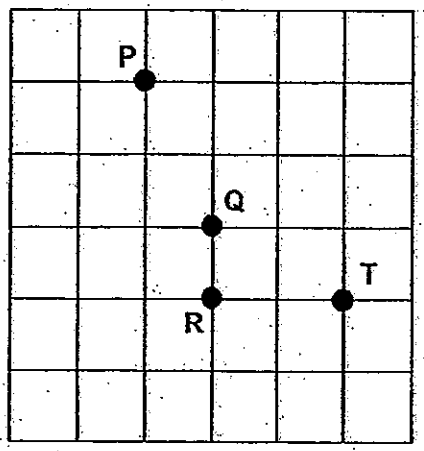


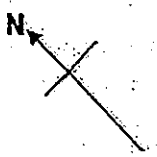
Ans: _____°

3

Do not write in this column

22. Refer to the square grid below and answer the following question.





In what direction is Point Q from Point R?

Ans:_____

---

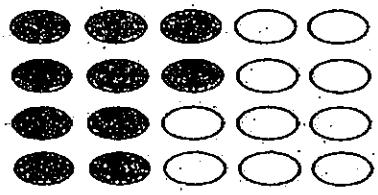
23. A set of 2 pairs of socks costs $7.50. How much must James pay if he buys 6 pairs of socks?

Ans: $ _____

2

Do not write in this column

24. How many **more** ovals must be shaded such that the percentage of shaded ovals becomes 70% of the total?



Ans: _____

25. A number, when divided by 7, gives a quotient of 11 and a remainder of 4. What is this number?

Ans: _____

2

Do not write in this column

Questions **26** to **30** carry 2 marks each. Show your working clearly in the space 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. $\frac{3}{5}$ of the balls in Box A and $\frac{2}{3}$ of the balls in Box B are red. The two boxes have the same number of red balls. What is the ratio of the number of balls in Box A to the number of balls in Box B?

Ans: _____

27. The average mass of Ryan, Sue and Tammy, was 62 kg.
Ryan was 15 kg heavier than Sue and Sue was 9 kg lighter than Tammy.
Find the mass of the lightest child?

Ans: _____ kg

4

Do not write in this column

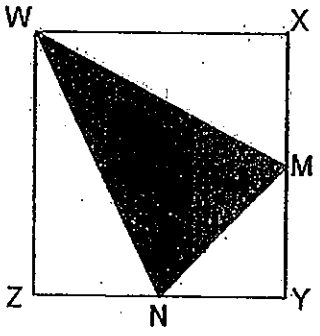
28. The table below shows the number of hours spent on tuition by a group of 20 children in a day.

Number of tuition hours/day	0	2	3	4
Number of children	2	7	8	3

What is the average number of hours spent on tuition each day?

Ans:_____ hours

29. WXYZ is a square with an area of 64 cm². Given that M is the midpoint of XY and N is the midpoint of ZY, find the area of the shaded triangle WMN.



Ans:_____ cm^2

4

Do not write in this column

30. The mass of 2 dictionaries and 3 assessment books is 3.85 kg. The mass of 1 dictionary and 2 assessment books is 2.1 kg. What is the mass of 1 dictionary and 1 assessment book?

Ans: _____ kg

End of Paper 1

2

Index No. | | | | | | | – | |

SINGAPORE CHINESE GIRLS' SCHOOL

PRELIMINARY EXAMINATION 2013

PRIMARY 6

MATHEMATICS

PAPER 2

Name : _____ ( ) 20 August 2013

Class : Primary 6 SY / C / G / SE / P

	Mark	Max Mark
Paper 2		60

Parent's Signature

18 Questions
60 Marks

Total Time For Paper 2: 1 h 40 min

INSTRUCTIONS TO CANDIDATES
Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.

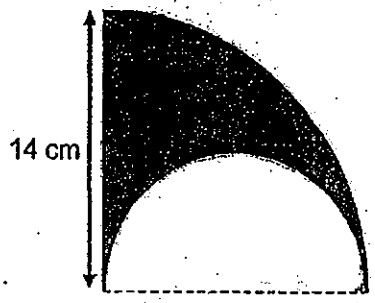
Questions 1 to 5 carry 2 marks each. Show your working clearly in the space below each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. **(10 marks)**

Do not write in this column

1 There was 3 times as much water in Tank A than in Tank B. After 50ℓ of water was added to each tank, the ratio of the amount of water in Tank A to the amount of water in Tank B is 5 : 2. How much more water was there in Tank A than in Tank B?

Ans: _____ ℓ

2 The figure below is made up of a quadrant and a semi-circle. Find the perimeter of the shaded figure. (Take $\pi = \frac{22}{7}$)



Ans: _____ cm

4

Do not write in this column

3. A group of people received free tickets to a movie. There were 10 more children than adults who received the tickets. Each child is entitled to 2 free tickets while each adult is entitled to 4. If a total of 170 free tickets were given out, how many adults received the tickets?

Ans:_____

4. Zarina wanted to buy a pair of shoes but she only had $\frac{2}{5}$ of the money. After her mother had given her $8, she was still short of $\frac{1}{2}$ of the money. How much more money does she need before she can buy her shoes?

Ans: $_____

4

5. Melanie put 18 sweets, 27 sweets, 13 sweets and 106 sweets in four bags A, B, C and D respectively. When she added an equal number of sweets into each of the bags, the number of sweets in Bag D became the same as the total number of sweets in Bags A, B and C.
How many sweets were added into each bag?

Do not write in this column

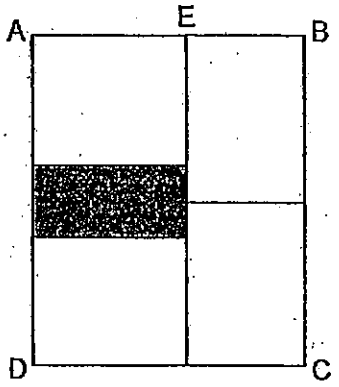
Ans: _____

2

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 awarded is shown in brackets [ ] at the end of each question or part-question. **(50 marks)**

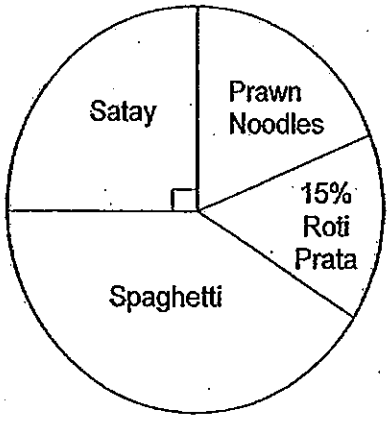
Do not write in this column

6. The following figure is made up of 4 identical rectangles and a shaded rectangle. The length of BC is 14 cm. If the area of the shaded part is 21 cm², what is the length of EB?



Ans:_____[3]

7. A survey was carried out to find out the favourite food among a group of people. The pie chart below shows the results of the survey. The number of people who like spaghetti is twice the number of those who like Prawn Noodles. What percentage of the people like spaghetti?

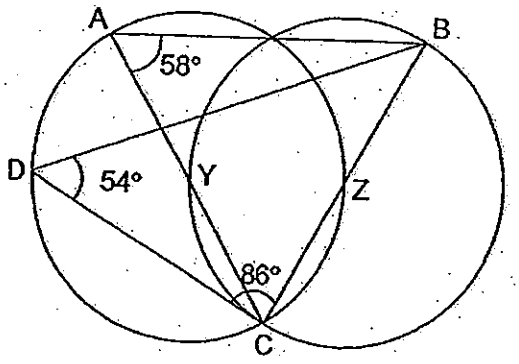


Ans:_____[3]

6

8. The figure below is made up of Triangles ABC and BCD, and 2 identical circles. Y and Z are the centres of the circles.
$\angle DCB = 86°$, $\angle CAB = 58°$ and $\angle CDB = 54°$.
Find $\angle ABD$.

Do not write in this column



Ans: _____ [3]

3

Do not write in this column

9. Demi used coloured beads to make some handicrafts. For every 5 yellow beads that she used, she used 1 green bead. She also used 3 red beads for every 20 yellow beads used. If she used a total of 216 coloured beads for a piece of handicraft, how many of them were green?

Ans:_____[3]

10. Joan has some $5 notes and Sharifah has some $10 notes. The average amount of money that they have is $3x. If Joan and Sharifah have the same number of notes, how many $10 notes does Sharifah have?

Ans:_____[3]

6

11. The structures below are formed using identical solids stacked on top of each other. The height of Figure 1 is 26 cm when the solids are stacked two levels high. It is 35 cm when the solids are stacked three levels high.

(a) How many levels must the solids be stacked in order for the structure to reach a height of 89 cm?

(b) How many solids are needed to form the structure of height 89 cm?

Do not write in this column

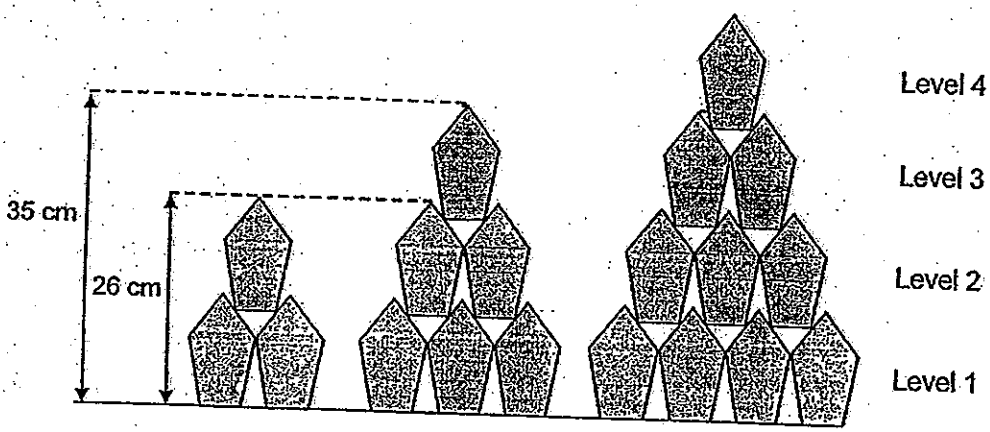


Figure 1 Figure 2 Figure 3

Ans: (a)_____[3]

(b)_____[1]

4

12. Mr Jones had a total of 1448 fiction and non-fiction books in his bookstore. He sold 80% of the fiction books and 75 % of the non-fiction books and found that he had 52 more fiction than non-fiction books left. How many non-fiction books did he sell?

Do not write in this column

Ans:_____[4]

13. Ismail had 258 stamps and Fabian had 186 stamps. Fabian sold twice as many stamps as Ismail. If Ismail had twice as many stamps as Fabian after selling their stamps, how many stamps did Ismail sell?

Ans:_____[4]

8

14. Kris baked 68 muffins every day. Five days after Kris started baking, Mandy started baking 90 muffins each day. How many muffins had Kris baked when Mandy had baked 254 more muffins than Kris?

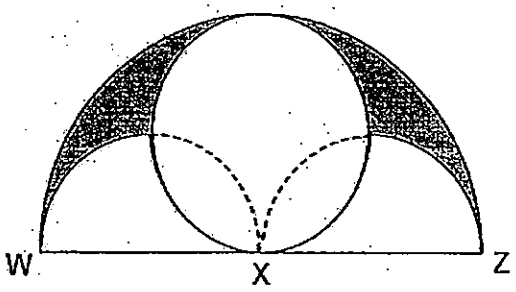
Do not write in this column

Ans: _____ [4]

4

15. The figure below is made up of three semi-circles and a circle. X is the centre of the large semi-circle and WZ is 36 cm. Find the area of the shaded part. (Express your answer in terms of π)

Do not write in this column



Ans:_____ [4]

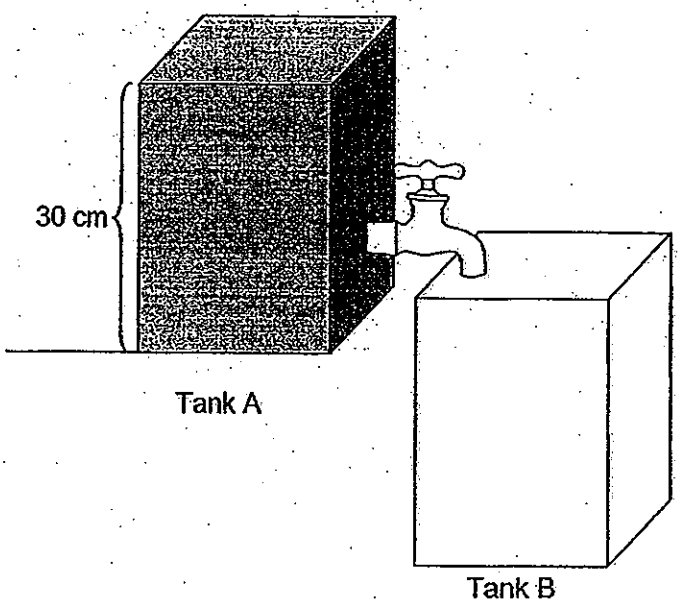
4

16. The figure below shows two identical tanks with the same base. Tank A contains water filled to its brim while Tank B is empty. Water drains from Tank A into Tank B for 5 minutes, at a rate of 440 cm^3/min. After the tap has been turned off, the depth of water in Tank B becomes $\frac{1}{2}$ the depth of water in Tank A.

(a) What is the base area of the Tank A?

(b) How much water is left in Tank A?

Do not write in this column



Ans: (a)_____[3]

(b)_____[2]

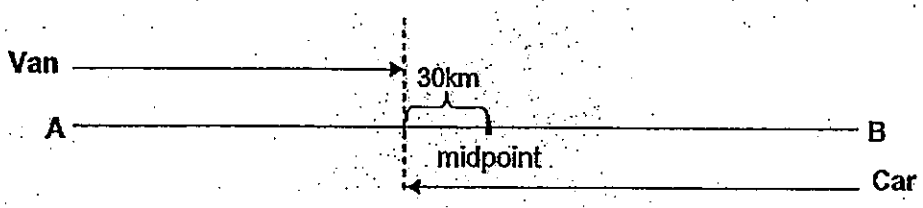
5

Do not write in this column

17. At 8.30 a.m., a van travelling at a speed of 50 km/h left Town A for Town B. One and a half hours later, a car left Town B for Town A. It passed the van at a point 30 km from the midpoint between Town A and Town B as shown below. The distance between Town A and Town B is 410 km.

(a) After the first $1\frac{1}{2}$ h, how far did the van travel before passing the car?

(b) What is the speed of the car?



Ans: (a)_____ [2]

(b)_____ [3]

5

18 Mdm Shanti bought $\frac{1}{3}$ as many chocolates as sweets. She gave each of her neighbours' children 4 chocolates and 3 sweets, after which she had 6 chocolates and 180 sweets left.

(a) How many children received the chocolates and sweets?

(b) How many sweets did she buy?

Do not write in this column

Ans: (a)_____ [3]

(b)_____ [2]

5

End of Paper

— Please check your work thoroughly —

Answer Key

EXAM PAPER 2013
SCHOOL : SCGS
SUBJECT : PRIMARY 6 MATHEMATICS

TERM : PRELIMINARY

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

16)3.2cm **17)1.73** **18)0.57** **19)0.63** **20)2:3**

21)473° **22)North-East** **23)$22.50** **24)4** **25)81**

26)10 : 9 **27)54kg** **28)2.5 hours** **29)24cm^2** **30)1.75kg**

Paper 2

1)10u – 9u = 1u
1u→50L
10u – 4u = 6u
6u→50L x 6 = 300L

2)¼ x 28 x 22/7 = 22
½ x 14 x 22/7 = 22
14 + 22 + 22 = 58cm

3)10 x 2 = 20
170 – 20 = 150
2 + 4 = 6
150÷6 = 25
Adults→25
Children→25 + 10 = 35
Ans: 25 adults.

4)1u→$8
5u→$8 x 5 = $40

5)18 + 27 + 13 = 58
X + X + X = 3X
58 + 3X
=106 + 1X
106 − 58 = 48
3X − 1X = 2X
2X→48
1X→48÷2= 24 sweets

6)14 − 3 = 11
11÷2 = 5.5cm

7)100%÷4 = 25%
25% + 15% = 40%
100% - 40% = 60%
2u + 1u = 3u
3u→60%
1u→60%÷3 = 20%
20% x 2 = 40%

8)∠CBD→180° − 54° − 86° = 40°
AC = CB = diameter
∠BAC = ∠ABC = 58°
∠ABD→58° − 40° = 18°

9)3 + 20 + 4 = 27
216÷27 = 8
8 x 4 = 32 green beads

10)3X x 2 = 6X
$10 + $5 = $15
Ans: (6X/15)

11)a)26 − 9 = 17
89 − 17 = 72
Levels above 1→72÷9 = 8
8 + 1 = 9

b)1+ 2 + 3 + 4 +.....9 = 45

12)52 x 5 = 260
1448 – 260 = 1188
5u + 4u = 9u
9u→1188
1u→1188÷9 = 132
3u→132 x 3 = 396 non-fiction books.

13)258 – 1X = 2Y

186 – 2X = 1Y) x2
372 – 4X = 2Y

4X – 1X = 3X
372 – 258 = 114
3X→114
1X→114÷3 = 38 stamps.

14)68 x 5 = 340
254 + 340 = 594
90 – 68 = 22
594÷22 = 27

Kris	Mandy
27 x 68 = 1836	90 x 27 = 2430
1836 + 340 = 2176	

Ans: 2176 muffins.

15)Area of fig→ ½ x 18 x 18 x Π = 162Π
½ x 36 x 18 = 324
(162Π - 324) ÷2 = 81Π - 162
(20.25Π - 40 .5) x 2 = 40.5Π - 81
(81Π - 162) – (40.5Π - 81)
Ans: (81Π - 162)cm^2

16)a)440 x 5 = 2200
2200 x 2 = 4400
4400 + 2200 = 6600
6600÷30 = 220cm^3

b)2200 x 2 = 4400cm^3

17)a)50 x 1.5 = 75
410 ÷ 2 = 205
205 + 30 = 235
410 – 235 = 175
175 – 75 = 100km

b)100 ÷ 50 = 2
235 ÷ 2 = 117.5km/h

18)a)18
b)18 x 4 = 72
72 + 6 = 78
1X→78
3X→78 x 3 = 234