



**RAFFLES GIRLS' PRIMARY SCHOOL  
SEMESTRAL ASSESSMENT 1  
MATHEMATICS (PAPER 1)  
PRIMARY 5**

Name: \_\_\_\_\_ (      )

Form Class: P5 \_\_\_\_\_ Banded Math Class: P5 \_\_\_\_\_

Date: 11 May 2010

Duration: 50 min

<b>Your Score (Out of 100 marks)</b>			
<b>Your Score (Out of 40 marks)</b>			
		<b>Banded Math Class</b>	<b>Level</b>
<b>PAPER 1 (40%)</b>	<b>Highest Score</b>		
	<b>Average Score</b>		
<b>TOTAL (100%)</b>	<b>Highest</b>		
	<b>Average Score</b>		
<b>Parent's Signature</b>			

**INSTRUCTIONS TO CANDIDATES**

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer **ALL** questions and show all working clearly.
4. **NO** calculator is allowed for this paper.

## SECTION A (20 marks)

Questions 1 to 10 carry 1 mark each. Question 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 your answer (1, 2, 3 or 4) on the OAS provided. All diagrams are not drawn to scale.

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1. There are \_\_\_\_\_ hundreds in 470 000.

(1) 47

(2) 470

(3) 4 700

(4) 47 000

( )

2. What is the product of  $76 \times 8000$ ?

(1) 608

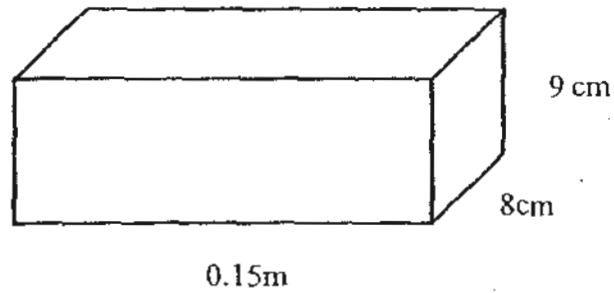
(2) 6 080

(3) 60 800

(4) 608 000

( )

3. Find the volume of the cuboid shown below.



(1)  $1.08 \text{ cm}^3$

(2)  $10.8 \text{ cm}^3$

(3)  $108 \text{ cm}^3$

(4)  $1080 \text{ cm}^3$

( )

4. What is the missing number in the box?

$$3\frac{3}{4} = 2\frac{\square}{8}$$

(1) 6

(2) 7

(3) 14

(4) 16

( )

5. Express  $5\frac{3}{8}$  as an improper fraction.

(1)  $\frac{16}{8}$

(2)  $\frac{29}{8}$

(3)  $\frac{43}{8}$

(4)  $\frac{53}{8}$

( )

6. Which of the following figures cannot be tessellated?

(1)



(2)



(3)



(4)



( )

7. In 213.859, the digit in the hundredths place is \_\_\_\_\_.

(1) 5

(2) 2

(3) 8

(4) 9

( )

8. Express 0.025 as a fraction in its simplest form.

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

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

(3)  $\frac{1}{40}$

(4)  $\frac{1}{50}$

( )

9. Which of the following ratio is equivalent to 12 : 9?

(1) 2 : 3

(2) 15 : 12

(3) 24 : 21

(4) 28 : 21

( )

10. Find the value of 36 012 + 847 401.

Round off your answer to the nearest hundreds.

(1) 883 000

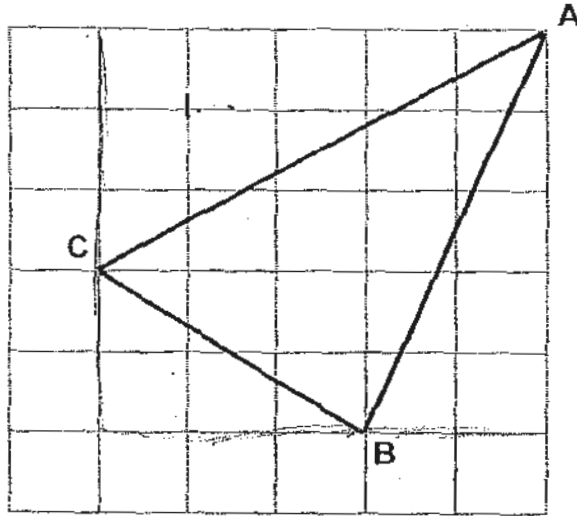
(2) 883 300

(3) 883 400

(4) 883 500

( )

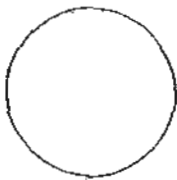
11. The triangle ABC is drawn on a 1-cm grid. Find the area of the triangle.



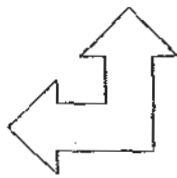
- (1)  $8 \text{ cm}^2$   
 (2)  $9.5 \text{ cm}^2$   
 (3)  $12 \text{ cm}^2$   
 (4)  $15.5 \text{ cm}^2$

( )

12. Which of the following figure(s) has/have no line of symmetry?



A



B



C



D

- (1) B only  
 (2) C only  
 (3) A and D  
 (4) All of the above

( )

13. Divide 24 by the sum of the first two common multiples of 2 and 4.

(1) 1

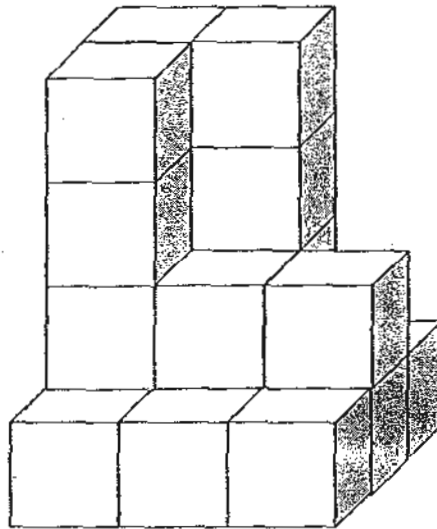
(2) 2

(3) 3

(4) 4

( )

14. The solid below is made up of some identical 1-cm cubes. What is the volume of the solid?



(1)  $13 \text{ cm}^3$

(2)  $15 \text{ cm}^3$

(3)  $18 \text{ cm}^3$

(4)  $20 \text{ cm}^3$

( )

15. Devi and Ella had 85 bookmarks together.

$\frac{3}{4}$  of Devi's bookmarks was equal to  $\frac{2}{3}$  of Ella's bookmarks.

How many bookmarks did Devi have?

(1) 17

(2) 40

(3) 45

(4) 51

( )

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. All diagrams are not drawn to scale. Answers in fractions or ratio must be expressed in the simplest form.

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16. Arrange the numbers in ascending order.

626 012, 616 012, 626 120, 615 012

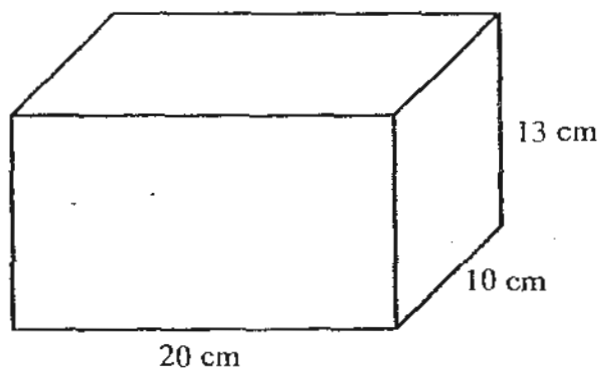
Ans: \_\_\_\_\_

17. Complete the number pattern below:

8.45, 8.2, \_\_\_\_\_, 7.7, 7.45

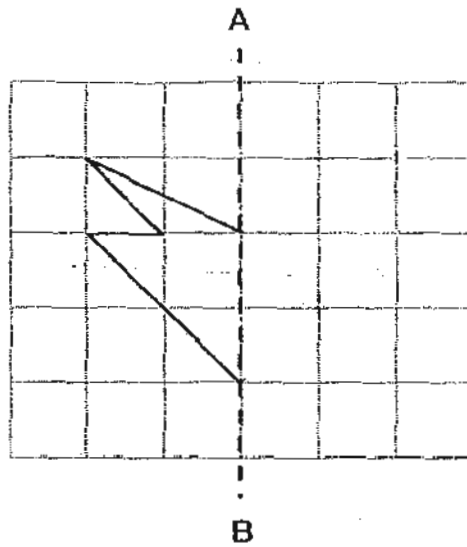
Ans: \_\_\_\_\_

18. How many 2-cm cubes can fit in the rectangular tank measuring 20 cm by 10 cm by 13 cm?

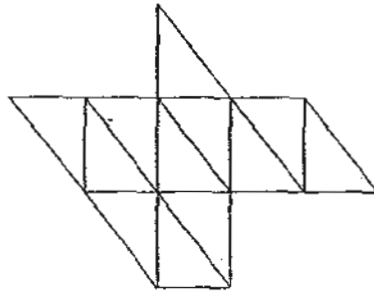


Ans: \_\_\_\_\_

19. Given that AB is a line of symmetry; complete the figure below.



20. The figure below is made up of several copies of a particular unit shape. How many unit shapes are used in the tessellation below?



Ans: \_\_\_\_\_

21. Mary baked a 2kg cake. She ate  $\frac{1}{4}$  kg. How much of the cake was left?

Ans: \_\_\_\_\_ kg

22. Express  $3 \overset{30}{\text{tens}}$  and 250 thousandths as a fraction in its simplest form.

Ans: \_\_\_\_\_

23. Find the value of  $36.7 \div 5$ .

Ans: \_\_\_\_\_

24. Round off 59.465 to the nearest whole number.

Ans: \_\_\_\_\_

25. Jack and Sally weigh a total of 64 kg.  
If Sally's weight is 24 kg, what is the ratio of Sally's weight to Jack's weight?  
Express your answer in its simplest form.

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 space provided. For questions which require units, give your answers in the units stated. All diagrams are not drawn to scale. Answers in fractions or ratio must be expressed in the simplest form.

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26. Celina earned \$50 for every packet of dolls sold.  
Each packet contained 10 dolls.  
If Celina earned a total of \$4250 at the end of the month,  
how many dolls did she sell?

Ans: \_\_\_\_\_

27. Solve the following.

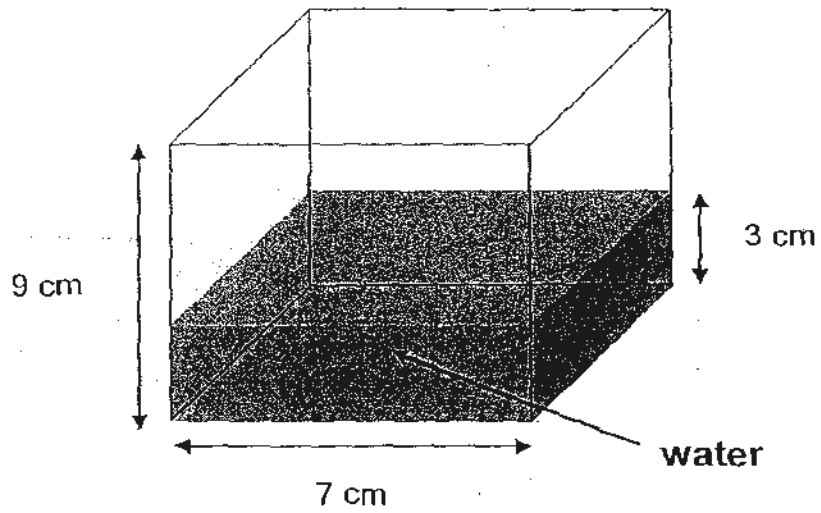
$$64 \times (3 + 5) \div 2 - 71$$

Ans: \_\_\_\_\_

28. 4 cups filled an empty pot with  $292\text{cm}^3$  of water.  
Another 4 cups and 7 beakers of water are needed to fill up the pot completely.  
If the capacity of the pot is  $654\text{cm}^3$ , what is the volume of water that each beaker can hold?

Ans: \_\_\_\_\_  $\text{cm}^3$

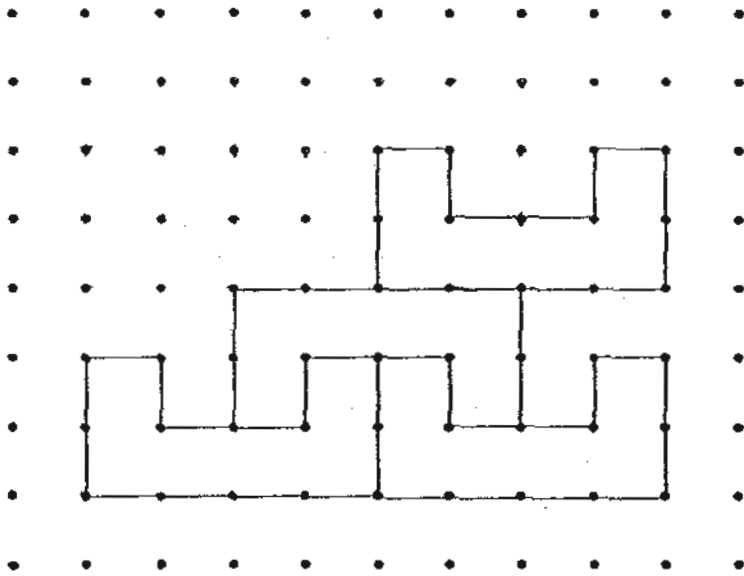
29. The volume of water in the rectangular tank is  $168 \text{ cm}^3$ .  
How much more water is needed to fill up the rectangular tank completely?



Ans: \_\_\_\_\_  $\text{cm}^3$

45

30. Extend the tessellation by drawing 2 more unit shapes.



End of Paper-

☺ Please check your work carefully ☺

Settlers: Mr Desmond Lee  
Mrs Jenine Soh  
Miss Wai Sook Har



**RAFFLES GIRLS' PRIMARY SCHOOL  
SEMESTRAL ASSESSMENT 1  
MATHEMATICS (PAPER 2)  
PRIMARY 5**

Name: \_\_\_\_\_ ( )

Form class: P5 \_\_\_\_\_ Banded Math Class: P5 \_\_\_\_\_

Date: 11 May 2010

Duration: 1 h 40 min

<b>Your Score (Out of 60 marks)</b>		
	<b>Banded Math Class</b>	<b>Level</b>
<b>Highest Score</b>		
<b>Average Score</b>		

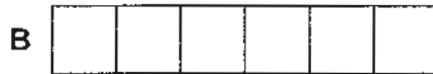
INSTRUCTIONS TO CANDIDATES

1. Do not turn over this page until you are told to do so.
2. Follow all instructions carefully.
3. Answer ALL questions and show all working clearly.
4. The use of calculator is allowed for this paper.

Questions 1 to 5 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. Figures are not drawn to scale. For questions which require units, give your answers in the units stated. (10 marks)

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1. Given the model below, find the ratio of A to B.  
Express your ratio in its simplest form.



Ans: \_\_\_\_\_ [2]

2. Find the product of all the common factors of 8 and 16.

Ans: \_\_\_\_\_ [2]

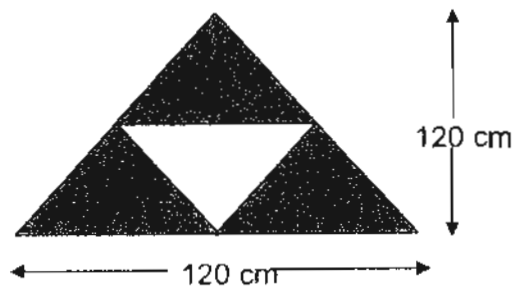
3.  $\frac{2}{3}$  of Mr Tan's salary is \$3360.  
How much is Mr Tan's salary?

Ans: \$ \_\_\_\_\_ [2]

4. Shanna had 2750 marbles. She gave  $\frac{2}{5}$  of her marbles to Tommy.  
She then gave  $\frac{1}{5}$  of the remainder to Umi.  
How many marbles did Umi receive from Shanna?

Ans: \_\_\_\_\_ [2]

5. The figure is made up of 4 identical triangles. Find the total shaded area.



Ans: \_\_\_\_\_ cm<sup>2</sup> [2]

For questions 6 to 18, show your working clearly in the space provided for each question and write your answers in the spaces provided. Figures are not drawn to scale. The number of marks available is shown in the brackets [ ] at the end of each question or part-question. (50 marks)

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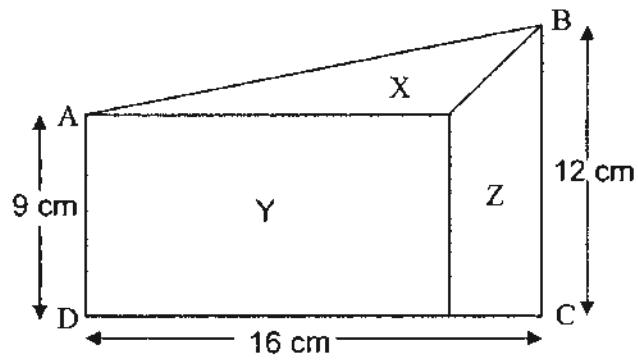
6. A rectangular container has a base area of  $143 \text{ cm}^2$ .  
It is filled with water to a depth of 5 cm.  
Another  $858 \text{ cm}^3$  of water is added to the container to fill it up completely.  
What is the height of the container?

Ans: \_\_\_\_\_ [3]

7. The ratio of the mass of chicken to the mass of fish was 3 : 5.  
16 kg of fish was sold to customers.  
After that, the ratio of the mass of chicken to the mass of the fish was 7 : 9.  
Find the mass of the fish at first.

Ans: \_\_\_\_\_ [3]

8. ABCD is a trapezium which is made up of a triangle, a rectangle and a trapezium, X, Y and Z respectively. Find the area of ABCD.



Ans: \_\_\_\_\_ [3]

9. Three different coloured sweets were given out at a party.  
The number of red sweets was thrice the number of yellow sweets.  
The number of blue sweets was 39 more than half the number of yellow sweets.  
If there were 118 more yellow sweets than blue sweets, how many sweets were given out altogether?

Ans: \_\_\_\_\_ [4]

10. Beaker A and Beaker B contained  $9\ell$  of water altogether at first.

Jamie poured  $\frac{1}{3}$  of the water from Beaker A to Beaker B.

Next, she poured  $\frac{3}{8}$  of the water from Beaker B to Beaker A.

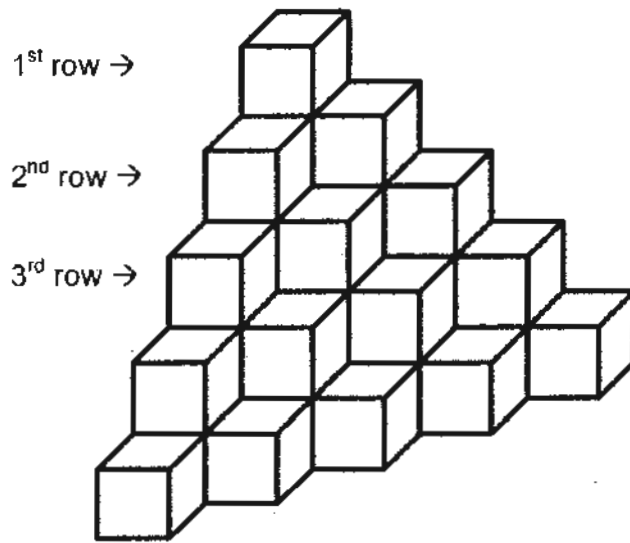
She then had the same volume of water in the 2 beakers.  
How much water was there in each beaker at first?

Express your answers in  $m\ell$ .

Ans: Beaker A \_\_\_\_\_ [2]

Beaker B \_\_\_\_\_ [2]

11. The figure shown below is made up of 2-cm cubes.  
What is the volume of the total number of cubes in the 17<sup>th</sup> row?

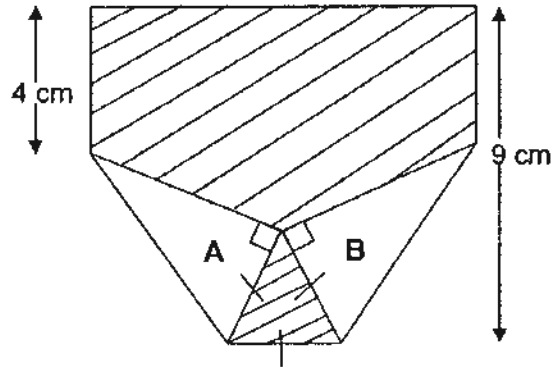


Ans: \_\_\_\_\_ [3]

12. Mr Soh travelled  $\frac{1}{6}$  of a journey by MRT and  $\frac{1}{2}$  of the remaining journey by bus. He was then 750 m away from his destination. What was the distance of the whole journey?

Ans: \_\_\_\_\_ [3]

13. During the Art and Craft lesson, Judy folds two corners of a piece of square paper as shown below before shading the paper. Triangle A and Triangle B are identical. Find the total area of the shaded part.



Ans: \_\_\_\_\_ [4]

14. Miss Lim bought beads just enough to distribute to the members of the Art Club. Each member would receive 10 beads. However, when 15 more members joined the club, each member could only receive 7 beads, with 60 beads remaining. How many members were there in the Art Club at first?

Ans: \_\_\_\_\_ [4]

15. A container of red dye weighs 2.27 kg when it is  $\frac{1}{3}$  full. Another identical container of red dye weighs 4.8 kg when it is  $\frac{6}{7}$  full. What is the weight of the empty container?

Ans: \_\_\_\_\_ [4]

16. Becca received some money for her birthday and decided to go shopping. If she bought 6 pairs of shoes, she would be short of \$9. If she used the same amount of money to buy 3 similar pairs of shoes and 2 similar bags, she would be left with \$16. Each bag cost \$76. How much money did Becca receive for her birthday?

Ans: \_\_\_\_\_ [5]

17. John had 993 tables and chairs at first.

After he sold  $\frac{2}{5}$  of the tables and  $\frac{5}{8}$  of the chairs, he had 459 tables and chairs left. How many tables did he sell?

Ans: \_\_\_\_\_ [5]

18. Catherine, Mindy and Shawn shared some beads in the ratio of 3 : 4 : 5 respectively.

During a game, Mindy lost  $\frac{1}{3}$  of her beads to Catherine and won  $\frac{2}{5}$  of Shawn's.

- (a) What is the ratio of Mindy's beads to Shawn's beads now?  
(b) How many beads does Catherine have now if they have a total of 252 beads?

Ans: (a) \_\_\_\_\_ [3]

(b) \_\_\_\_\_ [2]

**-End of Paper-**  
**Please check your work carefully ☺**

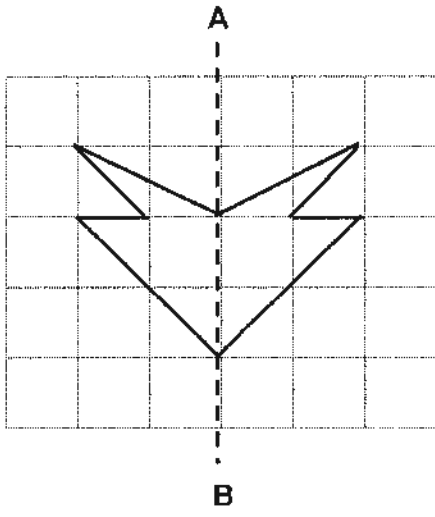
Setters: Mr Desmond Lee  
Mrs Jenine Soh  
Miss Wai Sook Har

**RGPS P5 SA1 Mathematics 2010 Answer Key (Paper 1)**

**Section A (1m each for Q1-10; 2m each for Q11-15)**

1) 3	6) 2	11) 2
2) 4	7) 1	12) 2
3) 4	8) 3	13) 2
4) 3	9) 4	14) 4
5) 3	10) 3	15) 2

**Section B (1 mark each)**

16) 615 012, 616 012, 626 012, 626 120	21) $1\frac{3}{4}$ or 1.75
17) 7.95	22) $30\frac{1}{4}$
18) 300	23) 7.34
19) 	24) 59
20) 12	25) 3 : 5

Section B (2 marks each)

26) $4250 \div 50 = 85$ $85 \times 10 = \underline{850}$	(M1, A1)
27) $64 \times (3 + 5) \div 2 - 71 = 185$ (A2 (Either right or wrong))	
28) $292 \div 4 = 73$ $73 \times 8 = 584 \rightarrow \text{M1}$ $654 - 584 = 70$ $70 \div 7 = \underline{10} \rightarrow \text{A1}$	$292 \times 2 = 584 \rightarrow \text{M1}$ $654 - 584 = 70$ $70 \div 7 = \underline{10} \rightarrow \text{A1}$
29) $(168 \div 7) + 3 = 8 \rightarrow \text{M1}$ $9 - 3 = 6$ $7 \times 8 \times 6 = \underline{336} \rightarrow \text{A1}$	$168 \div 3 = 56 \rightarrow \text{M1}$ $56 \times 6 = \underline{336} \rightarrow \text{A1}$
30) <div style="text-align: center; margin: 10px 0;"> </div> <p style="text-align: center;">A1 for each correct unit shape drawn</p>	

**RGPS P5 SA1 Mathematics 2010 Answer Key (Paper 2)**

2m each: Q1 – Q5

3m each: Q6 – Q8, Q11 – Q12

4m each: Q9 – Q10, Q13 – Q15

5m each: Q16 – Q18

<p>1) <math>9 : 6</math> [M1]  <math>= \underline{3 : 2}</math> [A1]</p>	
<p>2) Factors of 8 = 1, 2, 4, 8          Factors of 16 = 1, 2, 4, 8, 16          Common Factors = 1, 2, 4, 8 →M1  <math>1 \times 2 \times 4 \times 8 = \underline{64}</math> →A1</p>	
<p>3) <math>3\ 360 \div 2 = 1\ 680</math> → M1  <math>3 \times 1\ 680 = \underline{5\ 040}</math> → A1</p>	<p><math>3360 \times \frac{3}{2} = \underline{5040}</math> [M1, A1]</p>
<p>4) <math>1 - \frac{2}{5} = \frac{3}{5}</math>   <math>\frac{3}{5} \times 2750 = 1650</math> [M1]   <math>\frac{1}{5} \times 1650 = \underline{330}</math> [A1]</p>	<p><math>\frac{2}{5} \times 2750 = 1100</math>  <math>2750 - 1100 = 1650</math> [M1]  <math>\frac{1}{5} \times 1650 = \underline{330}</math> [A1]</p>
	<p><math>\frac{1}{5} \times \frac{3}{5} = \frac{3}{25}</math> [M1]  <math>\frac{3}{25} \times 2750 = \underline{330}</math> [A1]</p>
<p>5) <math>120 \div 2 = 60</math>  <math>\frac{1}{2} \times 60 \times 60 = 1800</math> ---M1  <math>1800 \times 3 = \underline{5400}</math> ---A1</p> <p><b><u>ALTERNATIVE METHOD</u></b>  <math>\frac{1}{2} \times 120 \times 120 = 7200</math> ---M1  <math>\frac{3}{4} \times 7200 = \underline{5400}</math> ---A1</p>	

6)  $143 \times 5 = 715$   $858 \div 143 = 6$  [M1]  
 $715 + 858 = 1573$  [M1]  $6 + 5 = 11$  [M1, A1]  
 $1573\text{cm}^3 + 143\text{cm}^2 = \mathbf{11\text{cm}}$  [M1, A1] Ans: 11cm

7) Before                      After  
C : F                              C : F  
3 : 5                              7 : 9  
\*(3x7)    (5x7)              \*(7x3)    (9x3)    \* No chicken meat was sold.  
21 : 35                          21 : 27  
35 - 27 = 8  
8 units → 16kg  
1 unit → 2kg                      --- M1  
35 units → 35 × 2kg = 70kg    --- M1, A1

8)

\*Draw imaginary lines to form the big rectangle  
Area of Rectangle BCDE =  $16 \times 12 = 192 \text{ cm}^2$     --- M1  
Area of triangle ABE =  $\frac{1}{2} \times 3 \times 16 = 24 \text{ cm}^2$     --- M1  
Area of the figure ABCD =  $192 - 24 = \mathbf{168 \text{ cm}^2}$     --- A1

OR:  
 $16 \times 9 = 144$     --- M1  
 $\frac{1}{2} \times 16 \times 3 = 24$  --- M1  
 $144 + 24 = 168$  --- A1

**Note: M1 will be allocated if pupils show**  
 $9 \times 13 + 9 \times 3 = 144$  or  $9 \times 12 + 9 \times 4 = 144$

9) Method 1

$$\begin{array}{ll} 1 \text{ unit} \rightarrow 39 + 118 = 157 & \text{M1} \\ 9 \text{ units} \rightarrow 151 \times 9 = 1413 & \text{M1} \\ 1413 + 39 = \underline{1452} & \text{M1, A1} \end{array}$$

Method 2

$$\begin{array}{ll} 1 \text{ unit} \rightarrow 39 + 118 = 157 & \text{M1} \\ 10 \text{ units} \rightarrow 157 \times 10 = 1570 & \text{M1} \\ 1570 - 118 = \underline{1452} & \text{M1, A1} \end{array}$$

10) Method 1

$$\begin{array}{ll} 1 \text{ unit} \rightarrow 9000 \text{ ml} \div 10 = 900 \text{ ml} & \\ 3 \text{ units} \rightarrow 3 \times 900 \text{ ml} = \underline{2700 \text{ ml}} & \text{<Beaker A> [M1, A1]} \\ 7 \text{ units} \rightarrow 7 \times 900 \text{ ml} = \underline{6300 \text{ ml}} & \text{<Beaker B> [M1, A1]} \end{array}$$

Method 2 (working backwards)

	Beaker A	Beaker B	
End	4500 ml	4500 ml	
Step 2	4500 - 2700 = 1800 ml	5 units → 4500 1 unit → 900 3 units → 2700 8 units → 7200	
Step 1	2 units → 1800 1 unit → 900 3 units → 2700 ml	7200 - 900 = 6300 ml	[M1, A1] [M1, A1]

$$11) \quad 17 + 16 + 15 + 14 + \dots + 3 + 2 + 1 = 153 \rightarrow \text{M1}$$

$$2 \times 2 \times 2 = 8$$

$$153 \times 8 \text{ cm}^3 = \underline{1224 \text{ cm}^3} \quad \rightarrow \text{M1, A1}$$

$$\text{OR: } \frac{17 \times 18}{2} = 153 \quad \rightarrow \text{M1}$$

$$153 \times 8 = \underline{1224} \quad \rightarrow \text{M1, A1}$$

**Alternative Method**

$$17 + (16 + 1) + (15 + 2) + (14 + 3) + \dots + (10 + 7) + (9 + 8)$$

$$= 17 \times 9$$

$$= 153 \quad (\text{M1})$$

$$153 \times 8 = \underline{1224} \quad (\text{M1, A1})$$

Note : Some pupils will find the volume for each row and then arrive at the 17<sup>th</sup> row with the volume of 1224.

$$12) \quad 1 - \frac{1}{6} = \frac{5}{6}$$

$$\frac{1}{2} \times \frac{5}{6} = \frac{5}{12} \quad (\text{M1})$$

5 units  $\rightarrow$  750

1 unit  $\rightarrow$  750m  $\div$  5 = 150m

12 units  $\rightarrow$  12 x 150m = 1 800m or 1.8km or 1  $\frac{4}{5}$  km or 1 km 800 m

[M1, A1]

OR: 750 x 2 = 1500

$$\frac{5}{6} \rightarrow 1500$$

$$\frac{1}{6} \rightarrow 1500 \div 5 = 300 \quad (\text{M1})$$

$$\frac{6}{6} \rightarrow 6 \times 300 = 1800 \quad (\text{A1})$$

13) Area of the square =  $9 \times 9 = 81 \text{ cm}^2$  --- M1  
 Length of the equilateral triangle  $9 \div 3 = 3 \text{ cm}$   
 Height of the right-angled triangle =  $9 - 4 = 5 \text{ cm}$   
 Area of right-angled triangle =  $\frac{1}{2} \times 3 \times 5 = 7.5 \text{ cm}^2$   
 Area of 4 right-angled triangles =  $4 \times 7.5 = 30 \text{ cm}^2$  --- M1  
 (2 unshaded right-angled triangles +  
 2 imaginary right-angled triangles before folding)  
 Area of the shaded area =  $81 - 30 = 51 \text{ cm}^2$  --- M1, A1  
**Ans: 51 cm<sup>2</sup>**

OR:  $\frac{1}{2} \times 3 \times 5 \times 4 = 30$  --- M1  
 $9 \times 9 = 81$  --- M1  
 $81 - 30 = \underline{51}$  --- M1, A1

**Alternative Method**

$4 \times 9 = 36$   
 $5 \times 9 = 45$  (Both statements – award M1)  
 $45 - 15 = 30$   
 $30 - 15 = 15$  (M1)  
 $36 + 15 = \underline{51}$  (M1, A1)

14) **Method 1: Guess and check**

Before	After	Difference
$40 \times 10 = 400$	$55 \times 7 = 385$	$400 - 385 = 15$
$50 \times 10 = 500$	$65 \times 7 = 455$	$500 - 455 = 45$
$\underline{55} \times 10 = 550$	$70 \times 7 = 490$	$550 - 490 = 60$

Ans: 55

For correct method and answer, award full 4m.

For wrong answer but correct start in guess and check, award M2.

**Method 2:**

$$15 \times 7 = 105 \quad \text{[M1]}$$

$$105 + 60 = 165 \quad \text{[M1]}$$

$$10 - 7 = 3$$

$$165 \div 3 = \underline{55} \quad \text{[M1, A1]}$$

**Alternative Method**

$$550 \div 10 = \underline{55} \quad \text{(M1)}$$

$$\underline{55} + 15 = 70 \quad \text{(M1)}$$

$$550 \div 70 = 7 \text{ R } 60 \quad \text{(M1, A1)}$$

(Or using Guess and Check using reverse method as above)

**Alternative Method**

Let  $a$  be the original number of members

$$a \times 10 = (a + 15) \times 7 + 60 \quad \text{(M2)}$$

$$10a = 7a + 105 + 60$$

$$3a = 165 \quad \text{(M1)}$$

$$a = \underline{55} \quad \text{(A1)}$$

15)	<p>Difference in weight = <math>4.8 \text{ kg} - 2.27 \text{ kg} = 2.53 \text{ kg}^*</math> --- M1</p> <p>*(Will cancel out the weight of the container)</p> <p>Difference in fraction = <math>\frac{6}{7} - \frac{1}{3} = \frac{11}{21}</math></p> <p>11 units <math>\rightarrow 2.53 \text{ kg}</math> --- M1</p> <p>1 unit <math>\rightarrow 2.53 \div 11 = 0.23 \text{ kg}</math></p> <p>21 units <math>\rightarrow 0.23 \times 21 = 4.83 \text{ kg}</math></p> <p>Weight of the red dye when it is <math>\frac{1}{3}</math> (<math>\frac{7}{21}</math>) full <math>\rightarrow 7 \times 0.23 = 1.61 \text{ kg}</math> --- M1</p> <p>Weight of the empty container = <math>2.27 \text{ kg} - 1.61 \text{ kg} = 0.66 \text{ kg}</math> --- A1</p> <p><b>Ans : <u>0.66 kg</u></b></p> <p><b><u>OR</u></b></p> <p>Weight of the red dye when it is <math>\frac{6}{7}</math> (<math>\frac{18}{21}</math>) full <math>\rightarrow 18 \times 0.23 = 4.14 \text{ kg}</math> --- M1</p> <p>Weight of the empty container = <math>4.8 \text{ kg} - 4.14 \text{ kg} = 0.66 \text{ kg}</math> --- A1</p> <p><b>Ans : <u>0.66 kg</u></b></p>	
16)	<p><math>2 \times \\$76 = \\$152</math> M1</p> <p><math>\\$152 + \\$16 + \\$9 = \\$177</math> (3 shoes) M1, A1</p> <p><math>\\$177 + \\$152 + \\$16 = \underline{\\$345}</math> M1, A1</p> <p><math>2 \times \\$76 = \\$152</math> M1</p> <p><math>152 + 16 = 168</math> (2 bags, including extra)</p> <p><math>168 \div 3 = 56</math> (1 pair of shoe, excluding extra)</p> <p><math>56 \times 6 = 336</math> M1, A1</p> <p><math>336 + 9 = \underline{\\$345}</math> M1, A1</p> <p><math>2 \times \\$76 = \\$152</math> M1</p> <p><math>152 + 25 = 177</math> (3 shoes) M1, A1</p> <p><math>177 \div 3 = 59</math> (1 pair of shoe, including extra)</p> <p><math>59 \times 6 = 354</math> M1</p> <p><math>354 - 9 = \underline{\\$345}</math> A1</p>	

$$\begin{aligned}
 17) \quad & 459 \div 3 = 153 \quad [M1] \\
 & 8 \times 153 = 1\,224 \\
 & 1\,224 - 993 = 231 \quad [M1] \\
 & 231 \div 3 = 77 \quad [M1] \\
 & 2 \times 77 = \underline{154} \quad [M1, A1]
 \end{aligned}$$

OR

$$\begin{aligned}
 1T + 1C &\rightarrow 153 \quad [M1] \\
 8T + 8C &\rightarrow 1224 \\
 3T &\rightarrow 231 \quad [M1] \\
 1T &\rightarrow 77 \quad [M1] \\
 2T &\rightarrow 154 \quad [M1, A1]
 \end{aligned}$$

If pupil writes  $C = 76$ , award M1.

$$\begin{aligned}
 18) \quad & \text{(a) Catherine : Mindy : Shawn} \\
 & \quad 3 \quad : \quad 4 \quad : \quad 5 \\
 & \quad 9 \quad : \quad 12 \quad : \quad 15 \\
 & \text{Mindy's loss} \rightarrow \frac{1}{3} \times 12 \text{ units} = 4 \text{ units} \quad \text{--- M1} \\
 & \text{Mindy's gain} \rightarrow \frac{2}{5} \times 15 \text{ units} = 6 \text{ units} \quad \text{--- M1} \\
 & \text{Mindy's new units} \rightarrow 12 - 4 + 6 = 14 \\
 & \text{Catherine's new units} \rightarrow 9 + 4 = 13 \\
 & \text{Shawn's new units} \rightarrow 15 - 6 = 9 \\
 & \text{Mindy : Shawn} \\
 & \quad \underline{14 : 9} \quad \text{--- A1}
 \end{aligned}$$

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$$\begin{aligned}
 (b) \quad & \text{Total units} \rightarrow 14 + 13 + 9 = 36 \\
 & 36 \text{ units} \rightarrow 252 \\
 & 1 \text{ unit} \rightarrow 252 \div 36 = 7 \\
 & 13 \text{ units} \rightarrow 13 \times 7 = \underline{91} \quad [M1, A1]
 \end{aligned}$$

OR

$$\begin{aligned}
 (b) \quad & 252 \div 12 = 21 \\
 & 3 \times 21 = 63 \\
 & 4 \times 21 = 84 \\
 & \frac{1}{3} \times 84 = 28 \quad [M1] \\
 & 63 + 28 = \underline{91} \quad [A1]
 \end{aligned}$$