



# RED SWASTIKA SCHOOL

## 2018 CONTINUAL ASSESSMENT 1

### MATHEMATICS PAPER 1

Name : \_\_\_\_\_ (    )

Class : Primary 6 / \_\_\_\_\_

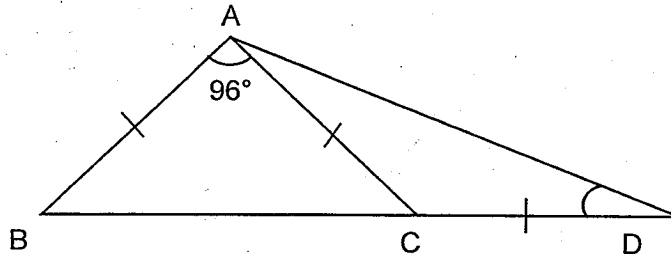
### BOOKLET A



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)

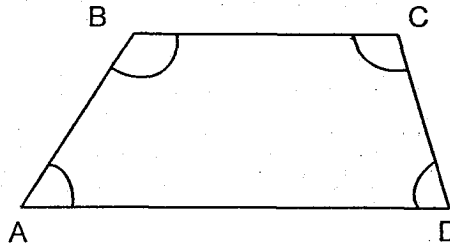
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- 1 In the figure, ABC and ACD are isosceles triangles.  $\angle BAC = 96^\circ$  and BCD is a straight line.  $AB = AC = CD$ . Find  $\angle ADC$ .



- (1)  $16^\circ$   
(2)  $21^\circ$   
(3)  $42^\circ$   
(4)  $84^\circ$
- 2 How many sixths are there in  $\frac{1}{2}$ ?
- (1) 12  
(2) 2  
(3) 3  
(4) 6
- 3 Joanna is 35 years old now. What was her age  $w$  years ago?
- (1)  $(35 - w)$  years old  
(2)  $(w - 35)$  years old  
(3)  $(w + 35)$  years old  
(4)  $35w$  years old
- 4 A pastry chef bakes 200 buns and some cakes daily. She has 40 more buns than cakes. What is the ratio of the number of cakes to the number of buns?
- (1) 3 : 2  
(2) 2 : 3  
(3) 5 : 4  
(4) 4 : 5

- 5 In the figure, ABCD is a trapezium. Which of the following expressions is correct?

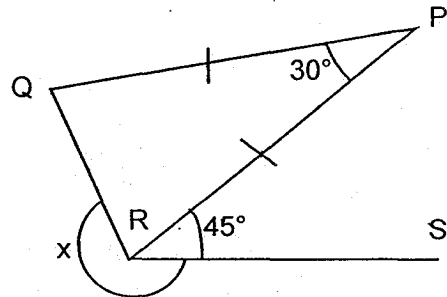


- (1)  $\angle BAD = \angle BCD$   
 (2)  $\angle ABC = \angle ADC$   
 (3)  $\angle BAD + \angle CDA = 180^\circ$   
 (4)  $\angle ABC + \angle DAB = 180^\circ$
- 6 What is the value of  $\frac{3b - 7 + 4b}{3} + 6$  when  $b = 4$ ?

- (1) 7  
 (2) 9  
 (3) 13  
 (4) 21

- 7 In the figure, PQR is an isosceles triangle.  $\angle QPR$  is  $30^\circ$  and  $\angle PRS$  is  $45^\circ$ . Find  $\angle x$ .

- (1)  $240^\circ$   
 (2)  $285^\circ$   
 (3)  $315^\circ$   
 (4)  $330^\circ$



- 8 A coffee machine can process  $\frac{1}{5}$  kg of coffee beans every minute. How many minutes will it take for the coffee machine to process 20 kg of coffee beans?

- (1) 100  
 (2) 15  
 (3) 5  
 (4) 4

9 In a PE store, the number of basketballs was 4 times the number of soccer balls. When  $\frac{1}{4}$  of the basketballs went missing, there were still 20 more basketballs than soccer balls. How many basketballs were left?

- (1) 10
- (2) 20
- (3) 30
- (4) 40

10 Doreen has  $\frac{3}{7}$  as many stickers as Eileen. What is the ratio of the number of stickers that Doreen has left to the number of stickers that Eileen has in the end after Doreen gives Eileen  $\frac{1}{6}$  of her stickers?

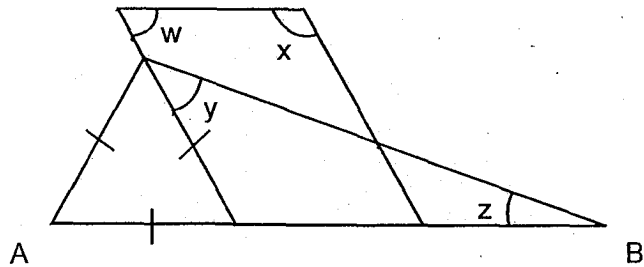
- (1) 1 : 3
- (2) 3 : 1
- (3) 2 : 8
- (4) 8 : 5

11 Arrange the following capacity from the largest to the smallest.

$5 \text{ l } 35 \text{ ml}$	$5.45 \text{ l}$	$5\frac{1}{4} \text{ l}$
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	<u>Largest</u>		<u>Smallest</u>
(1)	$5\frac{1}{4} \text{ l}$	$5.45 \text{ l}$	$5 \text{ l } 35 \text{ ml}$
(2)	$5\frac{1}{4} \text{ l}$	$5 \text{ l } 35 \text{ ml}$	$5.45 \text{ l}$
(3)	$5.45 \text{ l}$	$5\frac{1}{4} \text{ l}$	$5 \text{ l } 35 \text{ ml}$
(4)	$5 \text{ l } 35 \text{ ml}$	$5.45 \text{ l}$	$5\frac{1}{4} \text{ l}$

- 12 The figure is made up of an equilateral triangle, a parallelogram and a triangle. Line AB is a straight line. Find the sum of  $\angle w$ ,  $\angle x$ ,  $\angle y$  and  $\angle z$ .



- (1)  $240^\circ$   
 (2)  $270^\circ$   
 (3)  $300^\circ$   
 (4)  $330^\circ$

- 13 A painter needs  $y$  tins of paint to paint 5 rooms. How many tins of paint does he require to paint 8 rooms of the same size?

- (1)  $\frac{5}{8y}$   
 (2)  $\frac{8y}{5}$   
 (3)  $\frac{40}{y}$   
 (4)  $\frac{y}{40}$

- 14 Diana bought  $\frac{1}{4}$  kg of flour to bake cupcakes. She needed  $\frac{1}{8}$  kg of flour to bake one cupcake. How many cupcakes did Diana bake with all the flour she bought?

- (1) 8  
 (2) 2  
 (3) 6  
 (4) 4

15 Tessa and Wilson collected some cans during recess for recycling. On Day 1, Tessa collected 12 more cans than Wilson. On Day 2, Tessa collected another 36 cans and Wilson collected 30 cans. After counting the cans, Tessa collected  $\frac{6}{11}$  of the total number of cans.

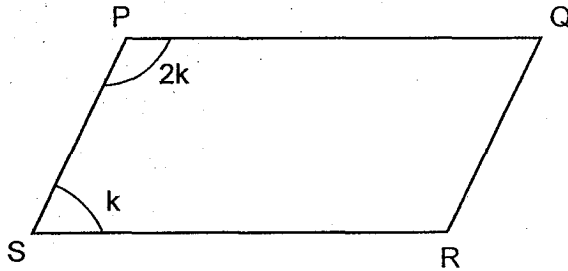
How many cans did Wilson collect?

- (1) 42
- (2) 90
- (3) 108
- (4) 198

Questions 16 to 20 carry 1 mark each. Write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (5 marks)

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16 PQRS is a parallelogram. Find  $\angle k$ .



Ans: \_\_\_\_\_<sup>o</sup>

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17 Find the value of  $12 \div \frac{4}{5}$ .

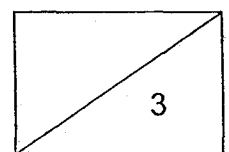
Ans: \_\_\_\_\_

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18 Pail A contains 700 ml of water and Pail B contains  $\frac{2}{5}$  l of water. What is the ratio of the amount of water in Pail A to the amount of water in Pail B? Give your answer in the simplest form.

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

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The table below shows the parking rate of Tampines Shopping Mall. Use the information to answer Questions 19 and 20.

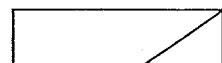
Period	Cost (\$)
First hour	Free parking
For every subsequent hour or part thereof	$k + 2$
After 6 p.m. (Per entry)	$2k - 1$

- 19 Mr Lim parked his vehicle at Tampines Shopping Mall for 2 hours 11 minutes during lunch hours. How much did he pay for his parking charges when he left the car park? Give your answer in terms of  $k$ .

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

- 
- 20 If  $k = 3$ , how much did Mr Lim pay for his parking charges if he entered Tampines Shopping Mall at 7.05 p.m. and left 2 hours later?

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



Questions 21 to 30 carry 2 marks each. Show your workings 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. (20 marks)

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- 21 Kendall ate  $\frac{1}{5}$  of a chocolate cake and divided the remaining cake equally among 8 of his friends. What fraction of the chocolate cake did each of his friends receive?

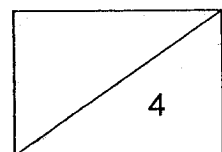
Ans: \_\_\_\_\_

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- 22 The ratio of the length of Ribbon A to the length of Ribbon B is 5 : 8. Ribbon A is 655 cm long. What is the difference in their length?

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

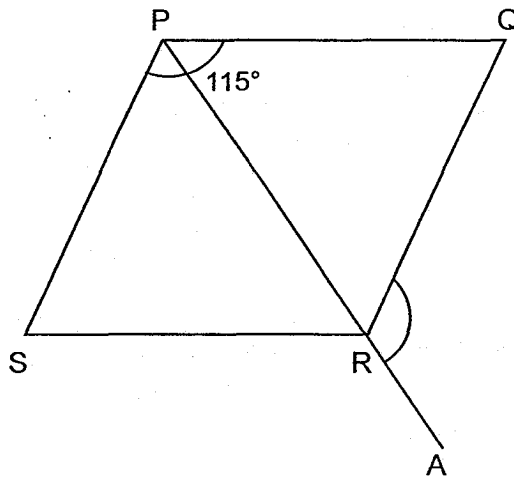
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- 23 The ratio of the area of Square Q to the area of Square R is 36 : 81.  
Find the ratio of the length of Square Q to the length of Square R.  
Give your answer in the simplest form.

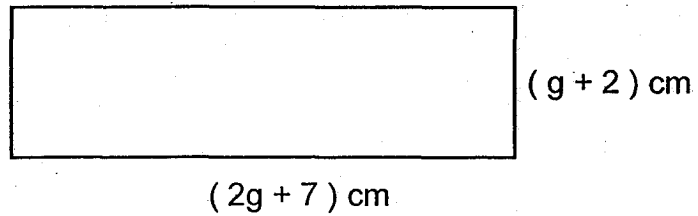
Ans: \_\_\_\_\_

- 24 PQRS is a rhombus. PRA is a straight line.  $\angle SPQ = 115^\circ$ .  
Find  $\angle QRA$ .



Ans: \_\_\_\_\_<sup>o</sup>

- 25 What is the perimeter of the rectangle below? Leave your answer in terms of  $g$ .



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

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- 26 24 bulbs were installed on each side of a square stage with 1 bulb located at each of the corners. How many bulbs were installed around the square stage in total?

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

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- 27 A water tank with a base area of  $850 \text{ cm}^2$  contains some water. When some water is poured out, the water level decreases from 17 cm to 9 cm. What is the volume of water that is poured out?

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

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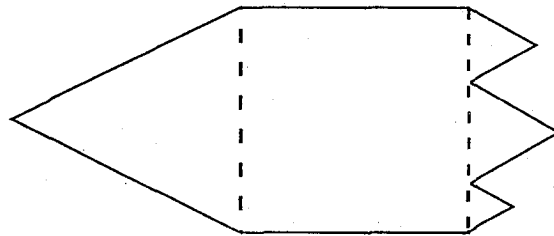


- 28 A copier machine started printing books at 8 a.m. and stopped at 12 noon to print 700 copies of books. How many more books can the copier machine print if it started at the same time but stopped at 5 p.m. instead?

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

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- 29 The figure is made up of a square of side 12 cm and 4 equilateral triangles. Find the perimeter of the figure.



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

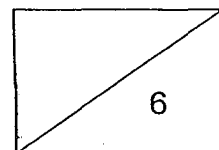
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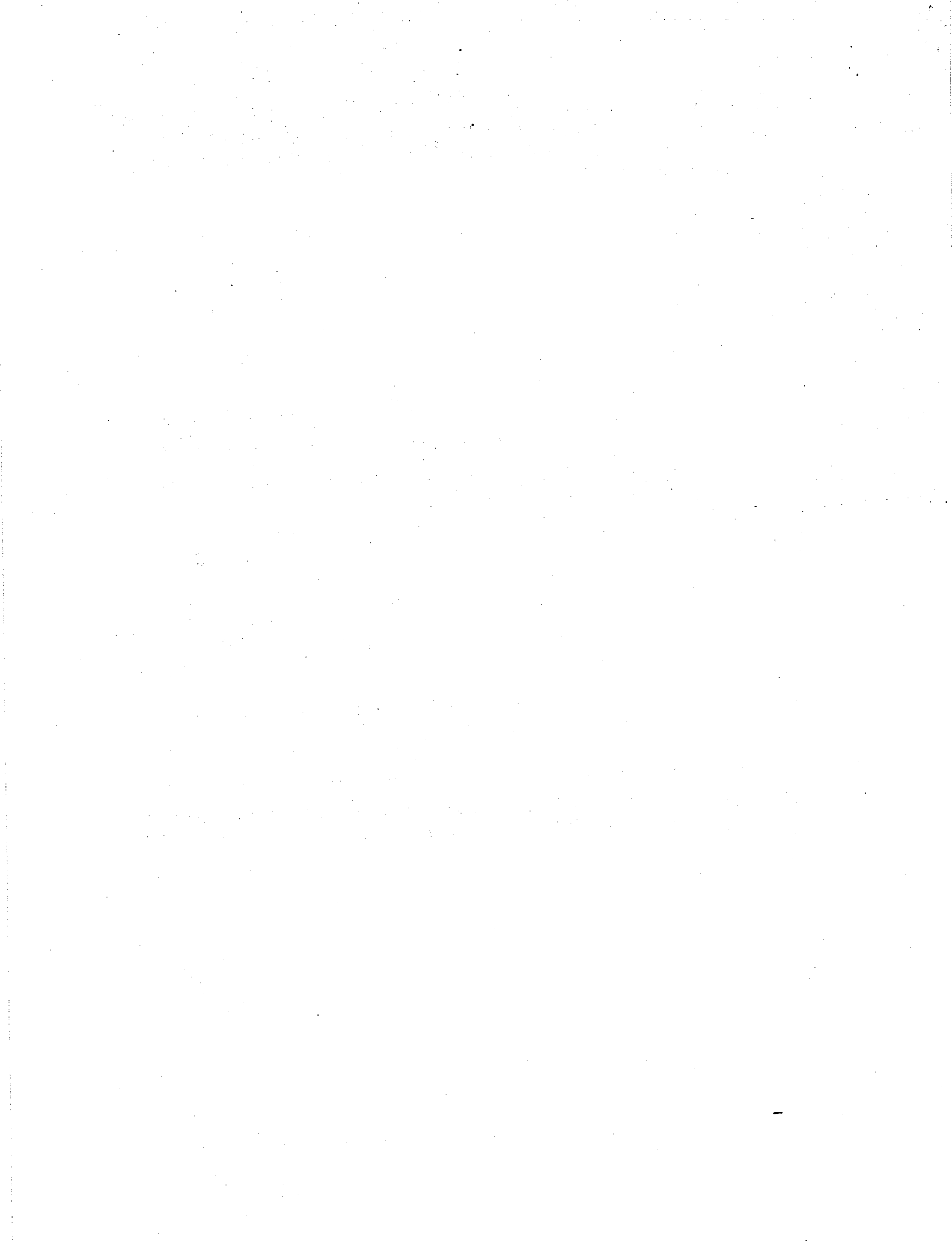
- 30 The average of 2 numbers is 40. Given that one number is thrice of the other number, what is the value of the larger number?

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

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END OF PAPER







# RED SWASTIKA SCHOOL

2018 CONTINUAL ASSESSMENT 1

## MATHEMATICS PAPER 1

Name : \_\_\_\_\_ (    )

Class : Primary 6 / \_\_\_\_\_

Date :

### BOOKLET B

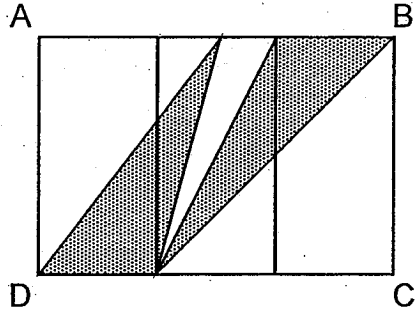




Questions 1 to 5 carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

- 1 ABCD is a figure that is made up of 3 identical rectangles. What is the ratio of the area of the shaded part to the area of the unshaded part?



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

- 2 Heather wanted to buy a bag but the amount she had was only  $\frac{2}{5}$  of the cost of the bag. After her father had given her another \$12, she was still short of  $\frac{1}{2}$  of the cost of the bag. How much did the bag cost?

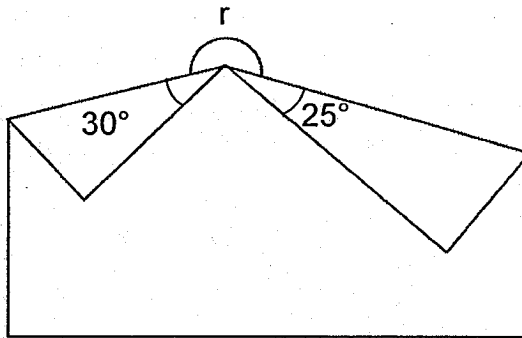
Ans: \$ \_\_\_\_\_

- 3  $\frac{3}{4}$  of a number is  $27b$  less than thrice of the same number.  
What is the number in terms of  $b$ ?

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

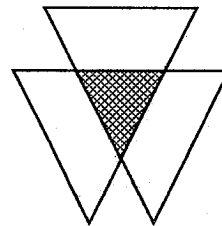


- 4 Sandra folded a rectangular piece of paper with 2 folds shown below. Find  $\angle r$ .

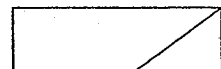


Ans: \_\_\_\_\_°

- 5 The figure is made up of 3 identical overlapping triangles. The area of each big triangle is  $89 \text{ cm}^2$  and the area of the entire figure is  $193 \text{ cm}^2$ . What is the area of the shaded region?



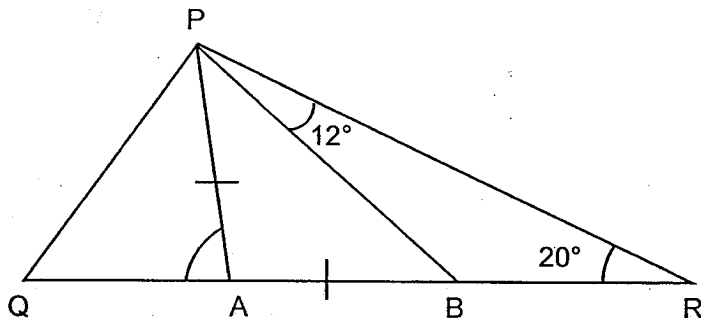
Ans: \_\_\_\_\_  $\text{cm}^2$



For Questions 6 to 17, show your working clearly and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question. (45 marks)

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- 6 PQR is a triangle made up of 3 smaller triangles. PAB is an isosceles triangle.  $AB = AP$  and QR is a straight line. Find  $\angle PAQ$ .



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

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- 7 The number of Randy's marbles is  $\frac{5}{2}$  of Andy's marbles and  $\frac{10}{3}$  of Peter's marbles. Given Randy has 50 marbles, how many marbles do the three boys have altogether?

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

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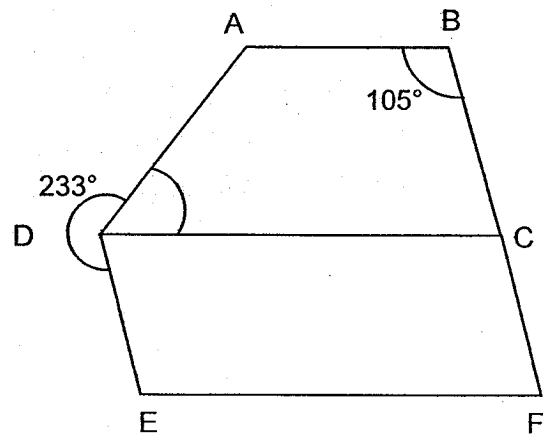


- 8 The ratio of the number of male shoppers to the total number of shoppers in a shopping mall is  $3 : 8$ . After 80% of the female shoppers had left, the number of male shoppers who remained in the mall became 90 more than the number of female shoppers. How many shoppers were there in the shopping mall at first?

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

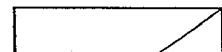
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- 9 ABCD is a trapezium and CDEF is a parallelogram.  $\angle ABC = 105^\circ$ ,  $\angle ADE = 233^\circ$  and BF is a straight line. Find  $\angle ADC$ .



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

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- 10 Mr Tan had twice as many textbooks as storybooks. After selling 124 textbooks and 17 storybooks, the number of textbooks he had was  $\frac{1}{2}$  the number of storybooks left. How many storybooks were left in the end?

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

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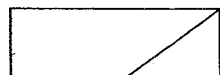
11 AAABCCBCAAABCCBCAAABCCBCAAABC

- (a) What is the 100<sup>th</sup> letter in the sequence?
- (b) How many letter 'C' are there if there are 142 letters in the sequence?

Ans: (a) \_\_\_\_\_ [1]

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

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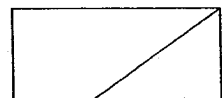
12 Mr Soon had 840 guppies and mollies in his aquarium. 60% of the fishes were guppies. He sold some guppies and the percentage of the mollies became 75% of the remaining fishes.

(a) How many guppies were left?

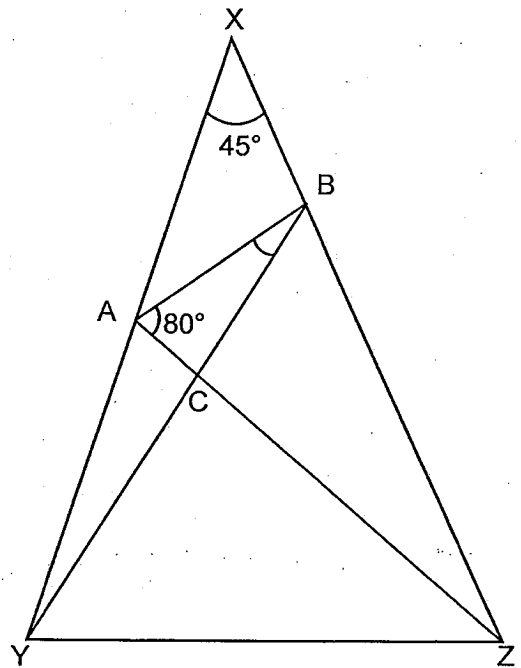
(b) Mr Soon sold all the mollies at 4 for \$25. How much did he collect from the sale of all the mollies?

Ans: (a) \_\_\_\_\_ [2]

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



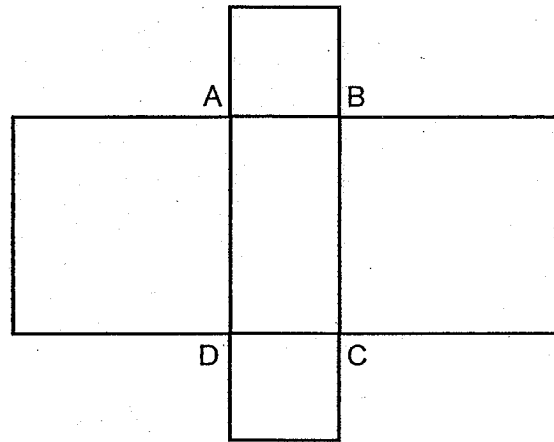
- 13 XYZ is a triangle.  $\angle BAC$  is  $80^\circ$  and  $\angle YXZ$  is  $45^\circ$ . ACZ and YCB are straight lines. The sum of  $\angle AYB$  and  $\angle BZA$  is  $24^\circ$ . Find  $\angle ABC$ .



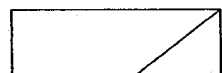
Ans: \_\_\_\_\_ [4]



- 14 The figure is made up of 2 big squares, 2 small squares and 1 rectangle. The perimeter of Rectangle ABCD is 24 cm. The total area of all the 4 squares is  $150 \text{ cm}^2$ . Find the area of Rectangle ABCD.



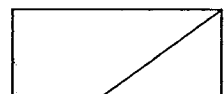
Ans: \_\_\_\_\_ [4]





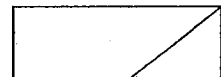
- 15  $\frac{2}{7}$  of the students in Class 6A are boys.  $\frac{2}{5}$  of the students in Class 6B are girls. There is an equal number of girls in both classes. If there is a total of 117 students in Class 6A and Class 6B, how many boys are there in Class 6A and 6B altogether?

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



- 16 The ratio of the number of 50-cent coins to the number of \$1 coins Belinda had was 1 : 3. After saving another 15 more 50-cent coins and 120 more \$1 coins,  $\frac{1}{5}$  of the total number of coins she had were 50-cent coins. How much money did Belinda have at first?

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



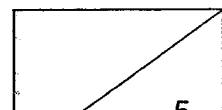
17  $\frac{3}{20}$  of the bottled water in a supermarket were sold on Monday.

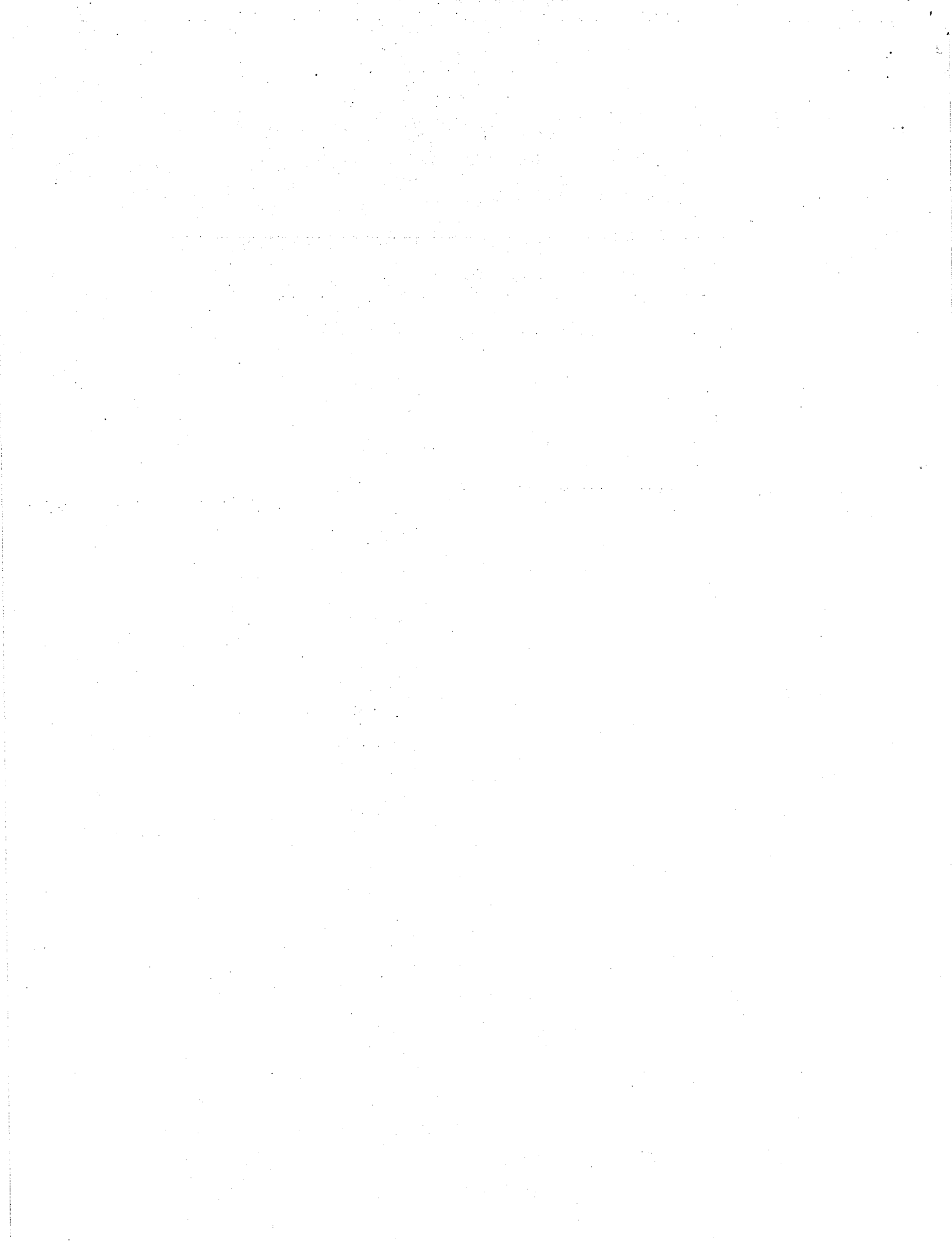
90 fewer bottles of water were sold on Tuesday than on Monday. 70 fewer bottles of water were sold on Wednesday than on Tuesday. On Thursday, 330 bottles of water were sold. The number of bottles of water left in the supermarket was  $\frac{1}{2}$  the number of bottles there was at first. How many bottles of water were there in the supermarket at first?

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

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END OF PAPER





SCHOOL : RED SWASTIKA PRIMARY SCHOOL  
LEVEL : PRIMARY 6  
SUBJECT : MATH  
TERM : 2018 CA1

**PAPER 1 BOOKLET A**

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
2	3	1	4	4	3	1	1	3	1

Q11	Q12	Q13	Q14	Q15
3	1	2	2	2

**PAPER 1 BOOKLET B**

Q16) $3K \rightarrow 180^\circ$ $K \rightarrow 60^\circ$
Q17) $12 \times \frac{5}{4} = \frac{15}{1} = 15$
Q18) A : B $700 : 400$ $7 : 4$
Q19) $1\text{h } 11\text{ min} \rightarrow 2\text{hr of parking}$ $2(K+2)$
Q20) $2k - 1$ $= 2 \times 3 - 1$ $= 6 - 1 = 5$
Q21) Remaining $\rightarrow 1 - \frac{1}{5} = \frac{4}{5}$ $\frac{4}{5} \div 8 = \frac{4}{5} \times \frac{1}{8} = \frac{1}{10}$
Q22) A : B $5 : 8$ $5u \rightarrow 655$ $1u \rightarrow 655 \div 5 = 131$ $8 - 5 = 3$ $3u \rightarrow 131 \times 3 = 393\text{ cm}$

Q23)	$Q : R$ $36 : 81$ Length of Q $\rightarrow 6u$ Length of R $\rightarrow 9u$ $LQ : LR$ $6 : 9$ $2 : 3$
Q24)	$180 - 65 = 115$ $115 \div 2 = 57.5$ $57.5 + 65 = 122.5^\circ$
Q25)	$2(g+2) + 2(2g+7)$ $= 2g + 4 + 4g + 14$ $= 6g + 18$ $= 6(g+3)\text{cm}$
Q26)	$24 - 2 = 22$ $22 \times 4 = 88$ $88 + 4 = 92$
Q27)	$17 - 9 = 8$ Vol. of water poured out $\rightarrow 8\text{cm} \times 850\text{cm}^3 = 6800\text{ml}$
Q28)	$4\text{hr} \rightarrow 700$ $1\text{hr} \rightarrow 700/4 = 175$ $9\text{hr} \rightarrow 175 \times 9 = 1575$ copies of books
Q29)	$12 \times 6 = 72 \text{ cm}$
Q30)	$40 \times 2 = 80$ $80 \div 4 = 20$ $20 \times 3 = 60$

## PAPER 2

Q1)	$1 : 2$
Q2)	$2/5 = 4/10$ $1 - 4/10 - 5/10 = 1/10$ $1/2 = 5/10$ $1/10 \rightarrow \$12$ $10/10$ (cost of the bag) = $\$12 \times 10 = \$120$
Q3)	The number = $4u$ $12u = 3u + 27b$ $9u = 27b$ $U = 3b$ $4u = 3b \times 4 = 12b$
Q4)	$180^\circ - 30^\circ \times 2 - 25^\circ \times 2 = 70^\circ$ $\angle r = 360^\circ - (70^\circ + 30^\circ + 25^\circ) = 235^\circ$
Q5)	$89 \times 3 = 267$ $267 - 193 = 74$ $74 \div 2 = 37\text{cm}^2$

<p>Q6) <math>\angle PBA = 12^\circ + 20^\circ = 32^\circ</math>  <math>\angle PAQ = 32^\circ + 32^\circ = 64^\circ</math></p>
<p>Q7) <math>50 = 10u</math>  <math>U = 5</math>  Total = <math>10u + 3u + 4u = 17u</math>  <math>17u = 5 \times 17 = 85</math></p>
<p>Q8) Male Total      M : F      <math>3u - u = 2u</math>  3 : 8      3 : 5      <math>2u = 90</math>  M : F      -80%      <math>u = 45</math>  3 : 5      3 : 1      <math>8u = 45 \times 8 = 360</math></p>
<p>Q9) <math>\angle DCF = 105^\circ</math> (corr <math>\angle</math>s, AB//DC)  <math>\angle DCB + 105^\circ = 180^\circ</math> (<math>\angle</math>s on a straight line)  <math>\angle DCB = 75^\circ</math>  <math>\angle ECD = 75^\circ</math> (vert. opp <math>\angle</math>s, ED//CB)  <math>\angle ADC = 360^\circ - 233^\circ - 75^\circ</math> (<math>\angle</math>s, on a point)  <math>= 52^\circ</math></p>
<p>Q10)      T : S      <math>2u - 124 = 1p</math>  Start (u) 2 : 1      <math>1u - 17 = 2p</math>                   -124 -7      <math>2u - 34 = 4p</math>  End (p) 1 : 2      <math>34 - (-124) = 3p</math>                                   <math>34 + 124 = 3p</math>                                   <math>124 - 34 = 3p</math>                                   <math>90 = 3p</math>                                   <math>P = 90 \div 3 = 30</math>                                   <math>2p = 30 \times 2 = 60</math></p>
<p>Q11) a) <math>100 \div 8 = 12R4</math>  AA<u>AB</u>  b) <math>142 \div 8 = 17R6</math>  <math>17 \times 3 = 51</math>  AA<u>ABCC</u>  <math>51 + 2 = 53</math></p>

Q12)

840  $\left\{ \begin{array}{l} 60\% \text{ (Guppies)} \\ 40\% \text{ (Mollies)} \end{array} \right.$

840 - ?  $\left\{ \begin{array}{l} 25\% \text{ (Guppies)} - 1u \\ 75\% \text{ (Mollies)} - 3u \end{array} \right.$

a)  $10\% \text{ of } 840 = 84$   
 $40\% \text{ of Fish} = 84 \times 4 = 336$   
 $336 = 75\% \text{ of new fish}$   
 $336 = 3u$   
 $1u = 112$   
b)  $336 \div 4 = 84$   
 $84 \times 25 = \$2100$

Q13)  $\angle YCZ = 336^\circ - 45^\circ - 24^\circ = 291^\circ$

$$\angle YCZ = 45^\circ + 24^\circ = 69^\circ$$

$$\angle ACB = 69^\circ \text{ (vert. opp. } \angle \text{s)}$$

$$\angle 180^\circ - 69^\circ - 80^\circ = 31^\circ$$

Q14)  $150\text{cm}^2 = 10 \square$

$$1\square = 15\text{cm}^2$$

$$2\square = \square$$

$$\square = 15\text{cm}^2 \times 2 = 30\text{cm}^2$$

Q15)

$$B \rightarrow 2u$$

$$B \rightarrow 3X$$

6A  $\left\{ \begin{array}{l} B \rightarrow 2u \\ G \rightarrow 5u \end{array} \right.$

6B  $\left\{ \begin{array}{l} B \rightarrow 3X \\ G \rightarrow 2X \end{array} \right.$

$$2X = 5u$$

$$5X + 7u = 117$$

$$10X + 14u = 234$$

$$234 = 14u + 25u$$

$$234 = 39u$$

$$U = 6$$

$$6A + 6B \text{ (boys)} = (6 \times 2) + (3 \div 2 \times 5) \times 6 = 57$$



Q16)	<u>No. of coins</u>	$1u + 15 = 1x$
	50c : \$1	$3u + 120 = 4x$
	1u : 3u	$4u + 60 = 4x$
	+15    +120	$4u + 60 = 3u + 120$
	1x : 4x	$4u - 3u = 120 - 60$
		$U = 60$

No of 50c = 60

Value of the 50c coins =  $60 \times 0.50 = 30$

No. of \$1 coins =  $60 \times 3 = 180$

Value of \$1 coins =  $180 \times 1 = 180$

Amount of money at first =  $180 + 30 = \$210$

Q17) Monday :  $1 - 3/20 = 17/20$   
 Tuesday :  $17/20 - 3/20 + 90 = 14/20 + 90$   
 Wednesday :  $14/20 + 90 - 3/20 + 90 + 70 = 11/20 + 250$   
 Thursday :  $11/20 + 250 - 330 = 11/20 - 80$   
 $11/20 - 80 = 1/2$   
 80  $\rightarrow$  1/20 of total bottles  
 Total =  $80 \times 20 = 1600$

