2016 SEMESTRAL ASSESSMENT 1

MATHEMATICS
PAPER 1

Date : 9 May 2016

BOOKLET A

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

6. You are <u>not</u> allowed to use a calculator.

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

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1 In 3 145 982, the digit 1 is in the _____ place.

(1) hundred thousands
(2) ten thousands
(3) thousands
(4) millions

2 What is the value of $36 + (12 - 6) \div 2 \times 3$?

(1) 7
(2) 37
(3) 45
(4) 63

3 How many hundreds are there in 876 000?

(1) 87
(2) 876
(3) 8 760
(4) 87 600

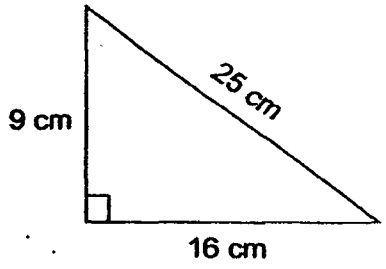
4 There were 2 089 545 spectators at the stadium. Express the number of spectators at the stadium to the nearest thousand.

(1) 2 090 000
(2) 2 089 000
(3) 2 089 500
(4) 2 089 550

5. In $\frac{8}{12} = \frac{[?]}{27}$, find the numerator in the brackets.

(1) 11
(2) 18
(3) 20
(4) 23

6 What is the area of the triangle?



(1) 50 cm^2
(2) 72 cm^2
(3) 144 cm^2
(4) 200 cm^2

7 In 2016, Ali is 24 years old and Ben is 16 years old. Find the ratio of Ali's age to Ben's age in 2020.

(1) 3 : 2
(2) 5 : 7
(3) 7 : 5
(4) 7 : 6

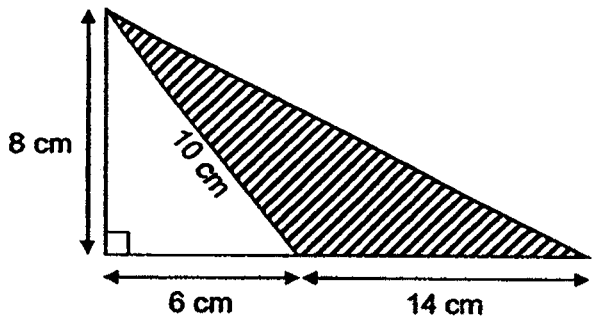
8 73 thousands + 20 hundreds = $\square$ ÷ 5

(1) 15 000
(2) 75 000
(3) 366 000
(4) 375 000

9 Add the largest possible 4-digit even number to 824 261. What digit is in the ten thousands place?

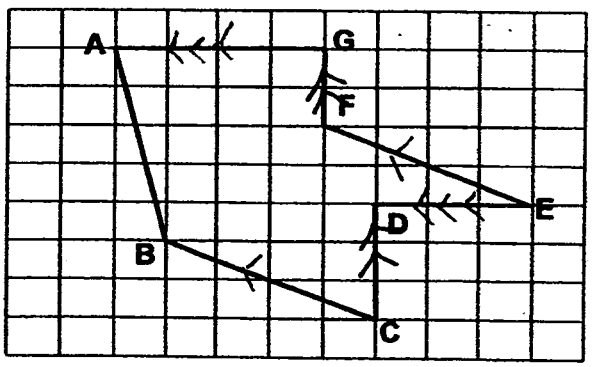
(1) 5
(2) 2
(3) 3
(4) 4

10 What is the area of the shaded triangle below?



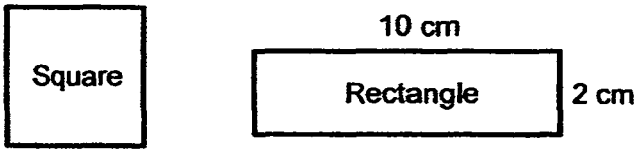
(1) 56 cm^2
(2) 70 cm^2
(3) 80 cm^2
(4) 112 cm^2

11 How many pair(s) of parallel lines are there in the grid?



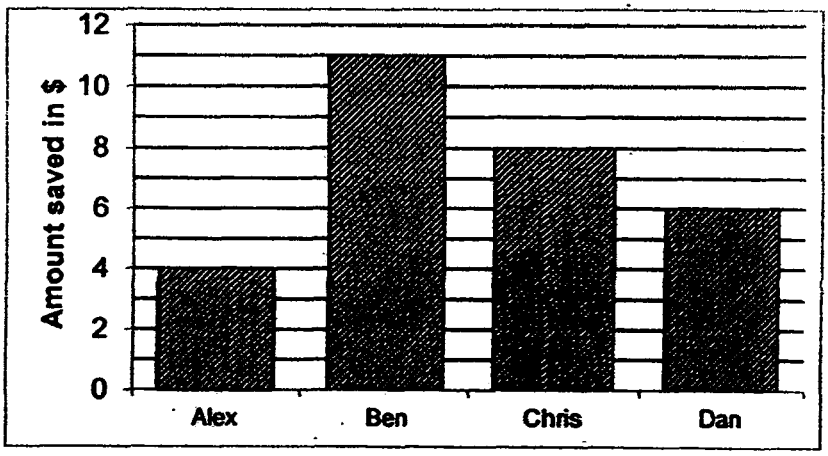
(1) 1
(2) 2
(3) 3
(4) 4

12 In the figure below, the rectangle has the same perimeter as the square. Find the side of the square.



(1) 5 cm
(2) 6 cm
(3) 20 cm
(4) 24 cm

13 Four friends were given a sum of $25 each. The bar graph shows the amount of money saved by each of them in the week.



How much did they spend altogether in the week?

(1) $20
(2) $29
(3) $54
(4) $71

14 The table below shows the sale items at a stationery shop.

Any 3 pens	$5
Any 2 files	$2

Kay bought 15 pens and 8 files with a $50 note.
What would be the change he received from the cashier?

(1) $33
(2) $27
(3) $17
(4) $11

15 Peter and Jane bought a gift for their parents. They shared the cost equally between them. Peter used $\frac{3}{8}$ of his savings while Jane used $\frac{1}{2}$ of her savings. What fraction of their total savings was used to buy the gift?

(1) $\frac{3}{7}$
(2) $\frac{7}{8}$
(3) $\frac{3}{14}$
(4) $\frac{7}{16}$

2016 SEMESTRAL ASSESSMENT 1

MATHEMATICS
PAPER 1

Class : Primary 5 / _____

Date : 9 May 2016

BOOKLET B

15 Questions
20 Marks

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)

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16 What is the smallest 5-digit odd number that can be formed using all the digits 0, 1, 2, 3, 8?

Ans: _____

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17 Find the product of 258 and 700.

Ans: _____

---

18 Arrange the following numbers from the smallest to the greatest.

1 303 000 , 1 030 000 , 1 003 300

Ans: _____ , _____ , _____

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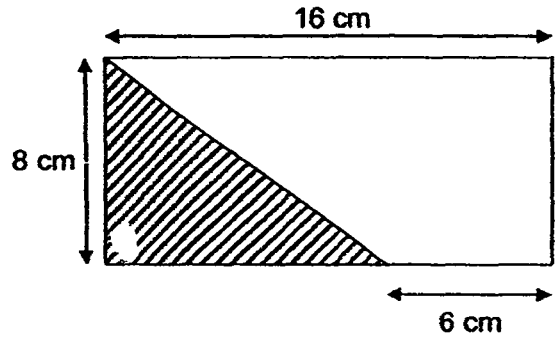
19 What is the remainder when you divide 8 067 by 6?

Ans: _____

4

20 Find the shaded area in the figure below.



Ans: _____ cm^2

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21 Find the value of $2\frac{1}{3} - \frac{3}{4}$ as a mixed number in its simplest form.

Ans: _____

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22 Gina and Tom shared a sum of money in the ratio 3 : 8.
Gina received $20 less than Tom. How much did Tom get?

Ans: $ _____

3

23 Sunflowers are sold in stalks of 3 for $8. What is the maximum number of stalks of sunflowers Susan can buy if she has $82?

Ans: _____

---

24 Find the missing number in the box below.

$3\,456 \times 23 = 3\,456 \times \square - 3\,456 \times 20$

Ans: _____

---

25 2 cupboards and 1 bookshelf cost $10 400. If the bookshelf costs $1 400 more than a cupboard, find the cost of a cupboard.

Ans: $_____

3

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

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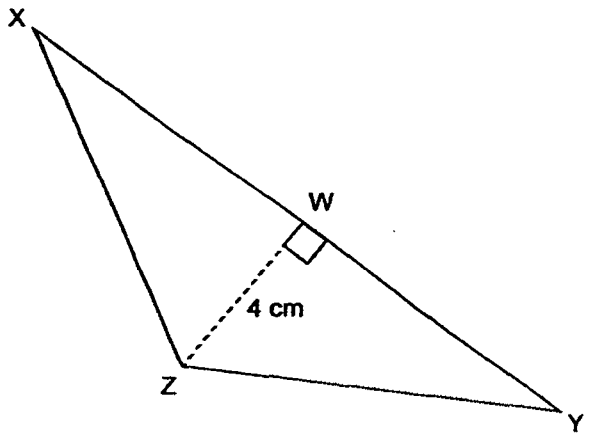
26 In the triangle below, XZ = 7 cm, XY = 10 cm and WZ = 4 cm. Find the area of Triangle XYZ.



Ans: _____ cm^2

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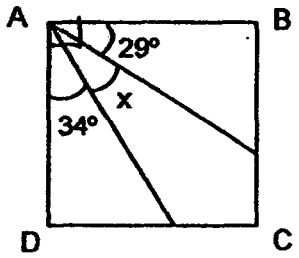
27 In the figure below, ABCD is a square. Find $\angle x$.



Ans: _____

4

28 Find value of 124 ÷ 9. Give your answer correct to 2 decimal place.

Ans: _____

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29 Ali listed 3 decimals below.

4.7 , 2.09 , 3.52

Find the greatest possible sum using two of the decimals.

Ans: _____

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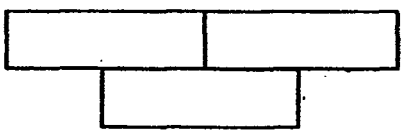
30 The figure is made up of similar rectangles. Each rectangle measures 5 cm by 2 cm. Find the perimeter of the figure.



Ans: _____ cm

END OF PAPER

2016 SEMESTRAL ASSESSMENT 1

MATHEMATICS
PAPER 2

Class : Primary 5 / _____

Date : 9 May 2016

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

6. You are allowed to use a calculator.

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

1 Lynn took 8 minutes to read each page of a book of 40 pages. How many hours would she take to complete reading the whole book?

Ans: _____ h

2 Poh has twice as many paper clips as Meng. Deb has thrice as many paper clips as Poh. Deb has 1 560 paper clips more than Meng. How many paper clips do the 3 children have altogether?

Ans: _____

4

3 Lynn bought 200 cm of ribbon for wrapping gifts. She kept 50 cm and used the rest for wrapping 8 gifts equally. What was the length of ribbon used to wrap 1 gift?

Ans: _____ cm

4 Paul had 50-cents and 20-cents coins in the ratio of 4 : 5. The total value of the coins was $12. How many 50-cents coins did Paul have?

Ans: _____

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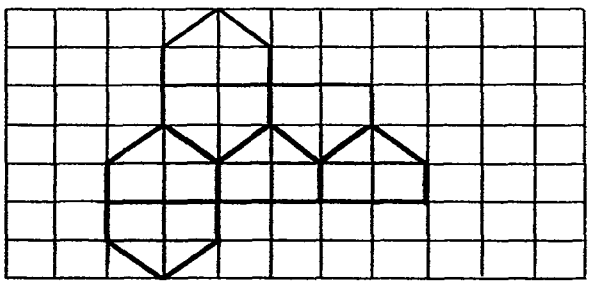
5 In the grid below, the figure is tessellated by a unit shape.



(a) Shade the unit shape. [1]

(b) Extend the tessellation by adding not more than 5 unit shapes such that the new figure is symmetrical. [1]

For Questions 6 to 18, show your working clearly in the space below each question and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question. (50 marks)

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6 The table shows the charges for booking a holiday chalet.

First three nights	$998
Every additional night	$275 per night

Mr Tan booked the holiday chalet for 5 nights for his family. How much did Mr Tan pay altogether?

Ans: _____ [3]

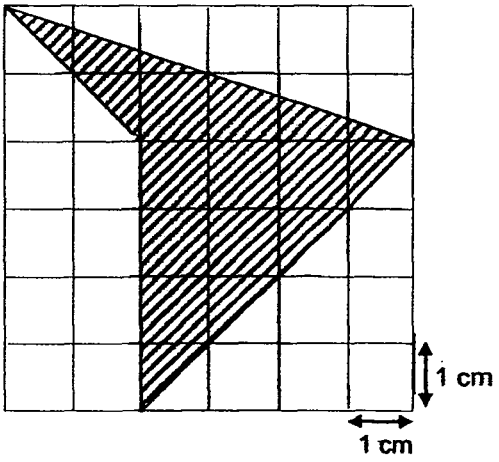
---

7 Miss Lim had just enough money to buy 90 notebooks of the same price. She bought only 30 notebooks for her students and had $120 left. What was the cost of one notebook?

Ans: _____ [3]

6

8 Find the area of the shaded figure given that each square measures 1 cm by 1 cm.



Ans: _____ [3]

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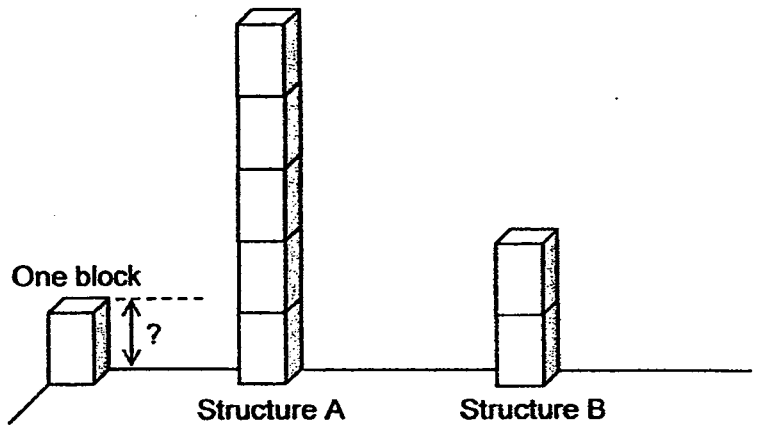
9 A rod is painted blue and red in the ratio 3 : 7. The rod painted blue is further cut into two pieces in the ratio 1 : 9. The shorter blue piece measures 18 cm. Find the length of the rod painted red.

Ans: _____ [3]

6

10 Structures A and B were built by using similar blocks on the same level ground as shown below. Their difference in height was $\frac{5}{6}$ m.



(a) Find the height of one block.

(b) Find the total height of Structures A and B.

Ans: (a) _____ [2]

(b) _____ [2]

4

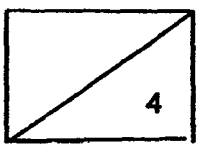
11 In January, Alice and Ryan had stamps in the ratio 5 : 2. In February, each of them bought the same number of stamps. Alice then had thrice as many stamps as Ryan.

(a) Find the ratio of the number of stamps Ryan had in January to the number of stamps he had in February.

(b) Find the ratio of the total number of stamps both had in January to the total number of stamps both had in February.

Ans: (a) _____ [2]

(b) _____ [2]



12 Ali bought 1 table, 1 bench and 4 identical chairs for a sum of money. He spent $\frac{3}{5}$ of the sum on the table. He spent $\frac{1}{4}$ of the remainder on the bench and the rest on the 4 chairs.

(a) What fraction of the sum of money did he spend on the bench?

(b) What fraction of the sum of money did he spend on 1 chair?

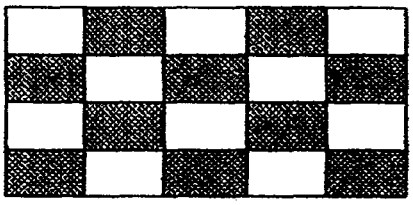
Ans: (a) _____ [2]

(b) _____ [3]

5

13 The picture below shows only the first 4 rows of black and white cards placed on a banner by the students of Class 4A.

Row 1 →
Row 2 →
Row 3 →
Row 4 →



In total, 320 rows of cards are needed. The remaining cards will be arranged in the pattern as shown. How many black cards will the students need for the whole banner?

Ans: _____ [3]

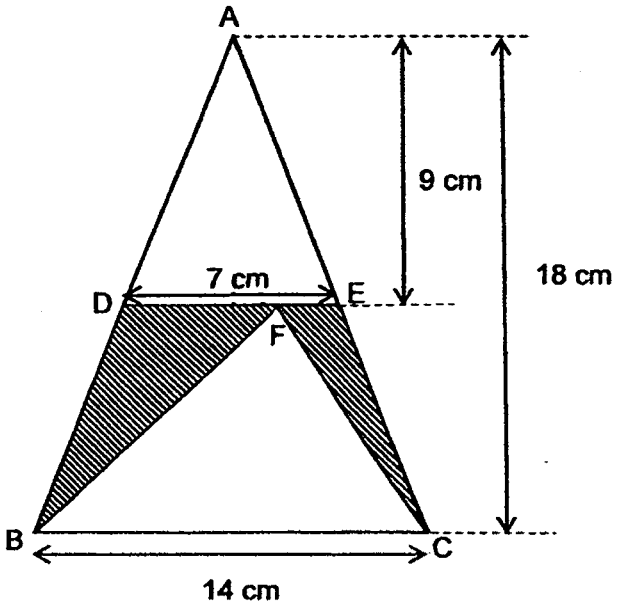
---

14 The number of red marbles is the same as the number of green marbles in a bag. After removing $\frac{1}{4}$ of the marbles, there were 36 red marbles and 54 green marbles left in the bag. Then another 20 red marbles and 20 green marbles were removed and there were $\frac{5}{12}$ of the marbles left in the end. How many red marbles were removed altogether?

Ans: _____ [3]

6

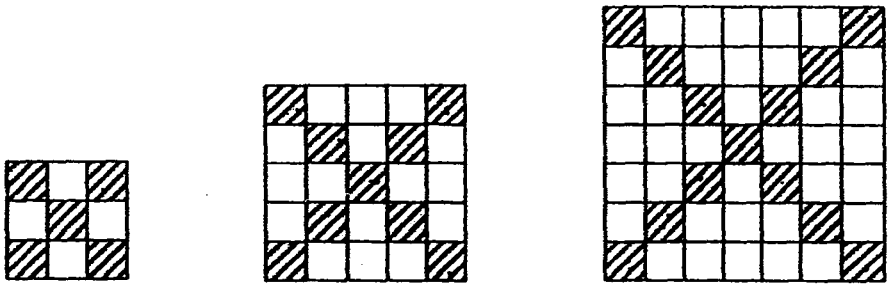
15 The figure is made up of triangles. Find the total area of the shaded parts.



Ans: _____ [4]

4

16 Study the pattern below carefully.



Pattern 1 Pattern 2 Pattern 3

(a) How many shaded squares are there in Pattern 4?

(b) How many squares are there altogether in Pattern 7?

(c) In which pattern will you find 37 shaded squares?

Ans: (a) _____ [1]

(b) _____ [2]

(c) _____ [2]

5

17 Jay spent $\frac{3}{8}$ of his money on books and another $40 on transport. He spent $\frac{2}{5}$ of the remainder food and saved the rest which was $120. What was the difference in the amount spent on books and food?

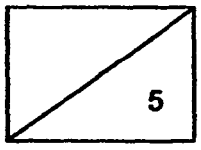
Ans: _____ [5]

5

18 At the beginning of the year, the number of members in Club A and Club B were in the ratio 5 : 7. At the end of Term One, some members left Club A to join Club B. The ratio of the number of members in Club A and Club B became 1 : 3. At the end of Term Two, each club received 54 new members. The ratio of the number of members in Club A and Club B became 2 : 3. How many members left Club A to join Club B at the end of Term One?

Ans: _____ [5]

END OF PAPER 2



ANSWER KEY

YEAR : 2016
LEVEL : PRIMARY 5
SCHOOL : RED SWASTIKA
SUBJECT : MATHEMATICS
TERM : SA1

Paper 1

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

Q16 10 283

Q17 180 600

Q18 1 003 300, 1 030 000, 1 303 000

Q19 3

Q20 40 cm^2

Q21 $1\frac{7}{12}$

Q22 8 - 3 = 5
5u → 20
1u → 4
8u → 4 x 8 ⇒ $32

Q23 8 x 10 → 80
3 x 10 ⇒ 30 stalks

Q24 23 + 20 ⇒ 43

Q25 2C + 1B = $10 400
10 400 – 1400 = 9000
9000 ÷ 3 ⇒ $3000

Q26 20 cm^2

Q27 29 + 34 → 63
90 – 63 ⇒ 27

Q28 13.78

Q29 8.22

Q30 (4 x 5 cm) + (4 x 2cm) ⇒ 28 cm

Paper 2

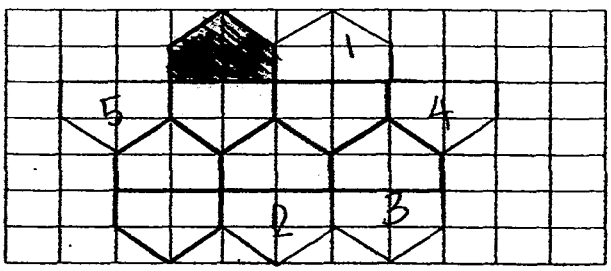
Q1 40 x 8 → 320 min ⇒ $5\frac{1}{3}$ h

Q2 5u → 1560
1u → 1560 ÷ 5 = 312
9u → 312 x 9 ⇒ 2808 paper clips

Q3 (200 cm – 50 cm) ÷ 8 ⇒ 18.75 cm

Q4 (4 x $0.50) + (5 x $0.20) = $3
$12 ÷ $3 = $4
Number of 50-cents coins = 4 x 4 ⇒ 16

Q5a & b



Q6 4th and 5th night → 275 x 2 = 550
Mr Tan paid → 998 + 550 ⇒ $1548

Q7 Notebook short → 90 – 30 = 60
Each notebook → $120 ÷ 60 ⇒ $2

Q8 Area of triangle A → $\frac{1}{2}$ x 4 x 2 = 4 cm^2
Area of triangle B → $\frac{1}{2}$ x 4 x 4 = 8 cm^2
Shaded area → 8 + 4 ⇒ 12 cm^2

Q9 Ratio → 1 : 9
1u → 18 cm
10u → 18 cm x 10 = 180 cm
Ratio → 3 : 7
3u → 180 cm
7u → $\frac{180}{3}$ cm x 7 ⇒ <u>420 cm</u>

Q10a 1 block → $\frac{5}{6}$ m ÷ 3 ⇒ $\frac{5}{18}$ m

Q10b Total height → 5 + 2 = 7 blocks
$\frac{5}{18}$ m x 7 ⇒ $1\frac{17}{18}$ m

Q11a

	Alice	:	Ryan	:	Difference
January	5	:	2	:	3
			x 2		
	10	:	4	:	6

	Alice	:	Ryan	:	Difference
February	3	:	1	:	2
			x 3		
	9	:	3	:	6

Ryan ⇒ <u>4 : 3</u>

Q11b

Total Jan	:	Total Feb
14	:	12

Alice & Ryan ⇒ <u>7 : 6</u>

Q12a Remainder → $1 - \frac{3}{5} = \frac{2}{5}$
Bench → $\frac{1}{4} \times \frac{2}{5} \Rightarrow \frac{1}{10}$

Q12b 4 chairs → $\frac{3}{4} \times \frac{2}{5} = \frac{3}{10}$
1 chair $\frac{3}{10} \div 4 \Rightarrow \frac{3}{40}$

Q13 320 ÷ 4 → 80
80 x 10 ⇒ <u>800 black cards</u>

Q14 $\frac{3}{4} - \frac{5}{12} = \frac{1}{3}$
$\frac{1}{3}$ → 20 red and 20 green
$\frac{3}{3}$ → 60 red and 60 green
Number of red marbles removed first → 60 – 36 = 24
Total no. of red marbles removed → 24 + 20 ⇒ <u>44</u>

Q15 Area of ABC $\rightarrow \frac{1}{2}$ x 14 cm x 18 cm = 126 cm^2

Area of ADE $\rightarrow \frac{1}{2}$ x 7 cm x 9 cm = 31.5 cm^2

Area of BCF $\rightarrow \frac{1}{2}$ x 14 cm x 9 cm = 63 cm^2

Shaded parts $\rightarrow$ 126 – 31.5 – 63 $\Rightarrow$ <u>31.5 cm^2</u>

Q16a 13 + 4 $\Rightarrow$ <u>17</u>

Q16b 7 x 2 + 1 $\Rightarrow$ <u>15</u>

Q16c 37 – 1 $\rightarrow$ 36

36 ÷ 4 $\Rightarrow$ <u>9</u>

Q17 $\frac{3}{5} \rightarrow$ \$120

$\frac{2}{5} \rightarrow \frac{\$120}{3}$ x 2 = \$80 (food)

$\frac{5}{5} \rightarrow \frac{\$120}{3}$ x 5 = \$200 (remainder)

$\frac{5}{8} \rightarrow$ \$200 + \$40 = \$240

$\frac{3}{8} \rightarrow \frac{240}{5}$ x 3 = \$144 (bk)

Diff $\rightarrow$ \$144 – 80 $\Rightarrow$ <u>\$64</u>

Q18

	Club A	:	Club B	:	Total
B4	5	:	7	:	12
T1	3	:	9	:	6
T2	12	:	18	:	6

12 – 3 = 9

9u $\rightarrow$ 54

5 – 3 = 2

2u $\rightarrow \frac{54}{9}$ x 2 $\Rightarrow$ <u>12 members</u>

End