

Date: 13 May 2016

MATHEMATICS

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 correct oval on the Optical Answer Sheet.
[20 marks]

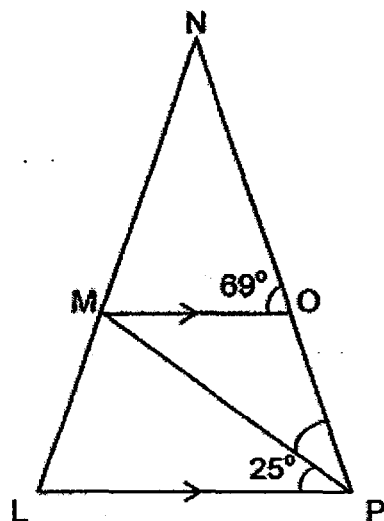
1) Round 5.355 to 2 decimal places.

- (1) 5.30
- (2) 5.35
- (3) 5.36
- (4) 5.40

2) Which of the following is the same as 7 050 g?

- (1) 7 kg 5 g
- (2) 7 kg 50 g
- (3) 70 kg 5 g
- (4) 70 kg 50 g

3) LMOP is a trapezium. MO is parallel to LP. Find $\angle MPO$.



- (1) 25°
- (2) 35°
- (3) 44°
- (4) 86°

4) Leo had \$60. He spent \$18 on food. What percentage of his money had he left?

- (1) 30%
- (2) 42%
- (3) 60%
- (4) 70%

5) In a class of 39 students, 12 are boys.
What is the ratio of the number of boys to the number of girls?

- (1) 4 : 9
- (2) 4 : 13
- (3) 9 : 4
- (4) 9 : 13

6) Alice, Betty, Cally and Diane played badminton this morning. Each girl played with each other only once. How many games were played altogether?

- (1) 6
- (2) 8
- (3) 9
- (4) 12

7) HAPPYHARRYHAPPY.....

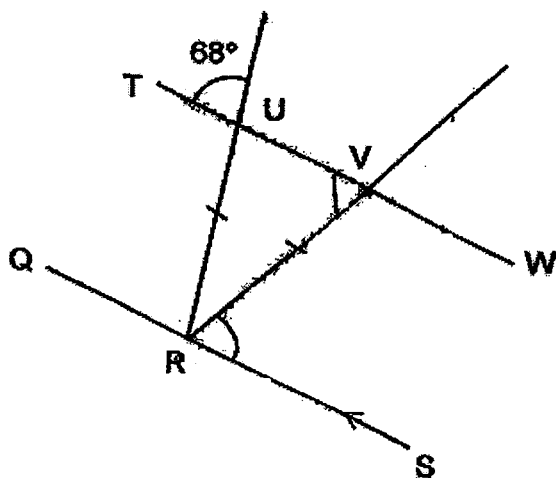
What will be the 100th letter in the pattern above?

- (1) A
- (2) H
- (3) P
- (4) Y

- 8) The average mass of Aaron and Ben is 45 kg. Aaron's mass is 80% of Ben's mass. Find the mass of Ben.

- (1) 20 kg
- (2) 25 kg
- (3) 40 kg
- (4) 50 kg

- 9) QS is parallel to TW. $RU = RV$. Find $\angle VRS$.



- (1) 44°
- (2) 56°
- (3) 68°
- (4) 112°

- 10) 0.5% is the same as _____.

- (1) 0.005
- (2) 0.05
- (3) 5
- (4) 50

- 11) 10 lanterns were hung at equal distance apart in a row. The distance between the first and the fourth lantern is 24 m. What is the distance between the first and the tenth lantern?

- (1) 54 m
- (2) 60 m
- (3) 72 m
- (4) 80 m

- 12) Madam Ang bought 5 pears and 6 mangoes for \$11.90. A pear cost 40 cents more than a mango. What was the cost of each mango?

- (1) \$0.90
- (2) \$1.30
- (3) \$2.30
- (4) \$5.75

- 13) Kylie, Linda and Melisa shared a sum of money.

Kylie received $\frac{1}{5}$ of the sum of money.

The ratio of Linda's share to Melisa's share was 3 : 5 .

If Kylie received \$80, how much money did Linda receive?

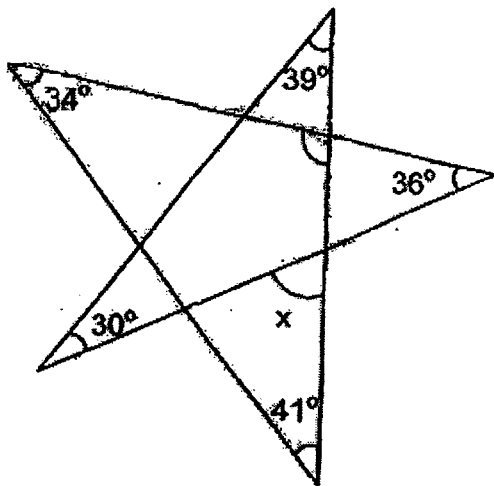
- (1) \$108
- (2) \$120
- (3) \$200
- (4) \$320

- 14) The area of the rectangle is 24 cm^2 .
What is the possible perimeter of the rectangle?
(The length and breadth are whole numbers.)



- (1) 6 cm
- (2) 11 cm
- (3) 12 cm
- (4) 22 cm

- 15) Find $\angle x$.



- (1) 69°
- (2) 69.5°
- (3) 70°
- (4) 80°

PRIMARY 6 MID-YEAR EXAMINATION 2016

Date: 13 May 2016

MATHEMATICS

PAPER 1

(BOOKLET B)

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) Express $\frac{55}{1000}$ as a decimal

Ans: _____

- 17) Find the value of $\frac{4}{5} + 20$
Give your answer as a fraction in the simplest form.

Ans: _____

- 18) What is the value of $3 + 3 + 3 - 3$?

Ans: _____

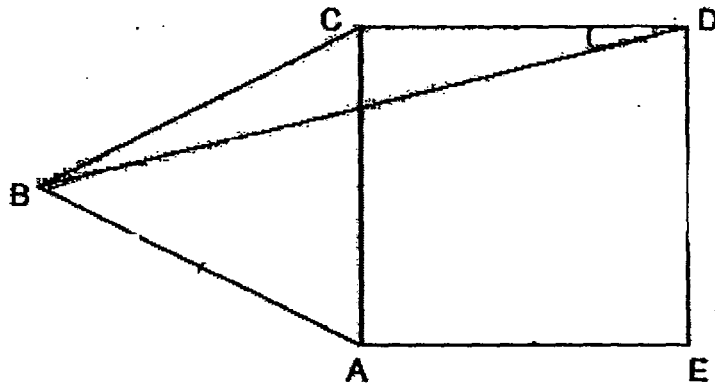
- 19) Sam's pocket money was increased from \$15 to \$18.
Find the percentage increase in his pocket money.

Ans: _____ %

- 20) The volume of a cube is 64 cm^3 . Find the length of one edge of the cube.

Ans: _____ cm

- 21) The figure, not drawn to scale, is made up of a square and an equilateral triangle. Calculate $\angle CDB$.



Ans: _____ °

- 22) The table below shows the number of television sets per flat in a housing estate.

| Number of television sets per flat | 0 | 1 | 2 | 3 |
|------------------------------------|----|----|----|----|
| Number of flats | 11 | 45 | 54 | 30 |

How many flats have at least 2 television sets?

Ans: _____

- 23) 12 watches cost \$a. What is the cost of 18 watches in terms of a?

Ans: \$ _____

- 24) What is the missing number in the box?

$$4 : 14 = \square : 63$$

Ans: _____

- 25) How many ninths are there in $\frac{7}{3}$?

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 spaces provided. For questions which require units, give your answers in the units stated. [10 marks]

26) The car park rate is shown below.

| | |
|---|--------|
| First 30 minutes | \$0.65 |
| Every additional 10 minutes or part thereof | \$0.25 |

Devi parked her car in the car park from 11 a.m. to 11.45 a.m.
How much did she have to pay?

Ans: \$ _____

27. For every \$1.50 George put into his piggy bank, his mother put in another 50 cents. When George had a total of \$100 in his piggy bank, what was the amount of money put in by his mother?

Ans: \$ _____

28) A, B, C, D and E represent five 2-digit numbers.

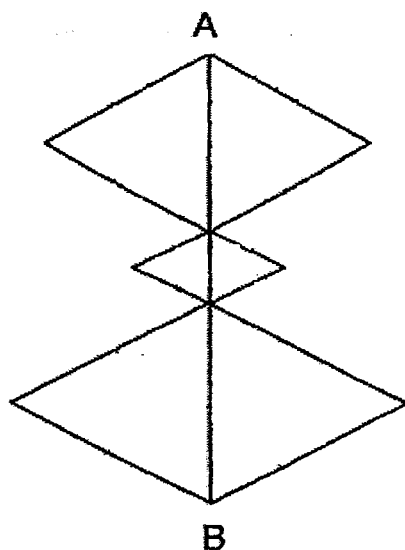
The average of these 5 numbers is 20.

What number does D represent?

| | |
|---|----|
| A | 18 |
| B | 20 |
| C | 22 |
| D | ■7 |
| E | 2■ |

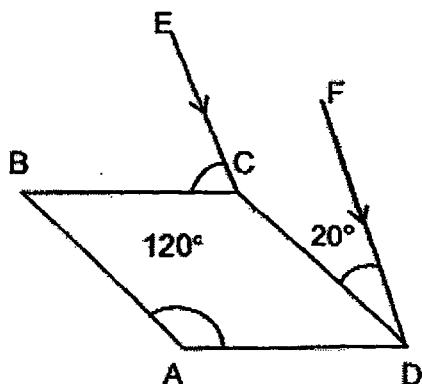
Ans: _____

- 29) The figure is made up of 3 pairs of equilateral triangles.
The length of AB is 21 cm. What is the perimeter of the figure?



Ans: _____ cm

- 30) ABCD is a rhombus. EC is parallel to FD. $\angle BAD = 120^\circ$. $\angle CDF = 20^\circ$.
Find $\angle ECB$.



Ans: _____ °

PRIMARY 6 MID-YEAR EXAMINATION 2016

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MATHEMATICS
PAPER 2

6. You are allowed to use a calculator.

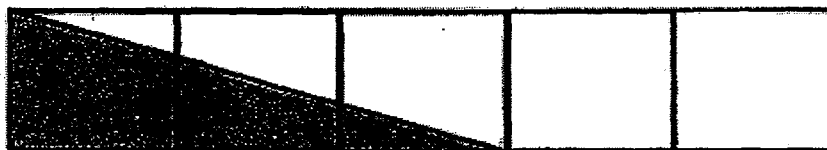
Questions 1 to 5 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

- 1) Sally is 9 years old. Her age is $\frac{1}{4}$ of her mother's age now.
How old will her mother be in 5 years' time?

Ans: _____ years

- 2) The figure below is made up of rectangles of the same size.
What fraction of the figure is shaded?



Ans: _____

- 3) Cindy had $\frac{5}{9}$ of water. She drank $\frac{1}{3}$ of it and kept the rest.
How much water was left?

Ans: _____

- 4) $\frac{2}{5}$ of Lily's savings is equal to $\frac{1}{4}$ of Meiyin's savings.

What fraction of Lily's savings is Meiyin's savings?

Ans: _____

- 5) Study the following table carefully.

| W | X | Y | Z |
|----|----|----|----|
| 1 | 2 | 3 | 4 |
| 8 | 7 | 6 | 5 |
| 9 | 10 | 11 | 12 |
| 16 | 15 | 14 | 13 |

Which column will the number 63 appear in?

Ans: _____

For questions 6 to 18, show your working clearly in the space provided for 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)

-
- 6) Grace has $\frac{1}{3}$ as many 50-cent stamps as 20-cent stamps.

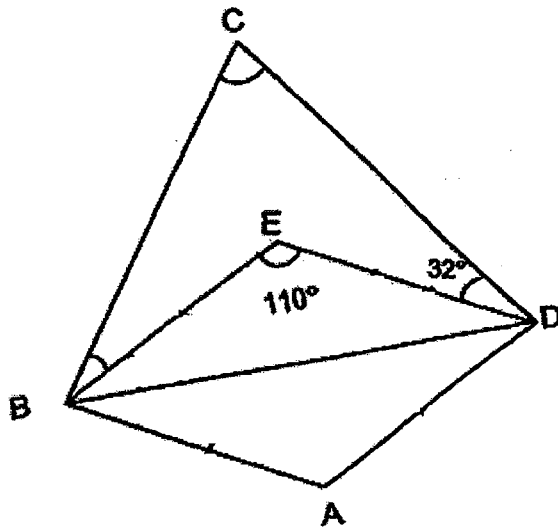
There are 6p more 20-cent stamps than 50-cent stamps.

- (a) Express the number of 20-cent stamps in terms of p.
(b) How much did she spend on the 20-cent stamps when $p = 8$?
Give your answer in dollars.

Ans: (a) _____ [1m]

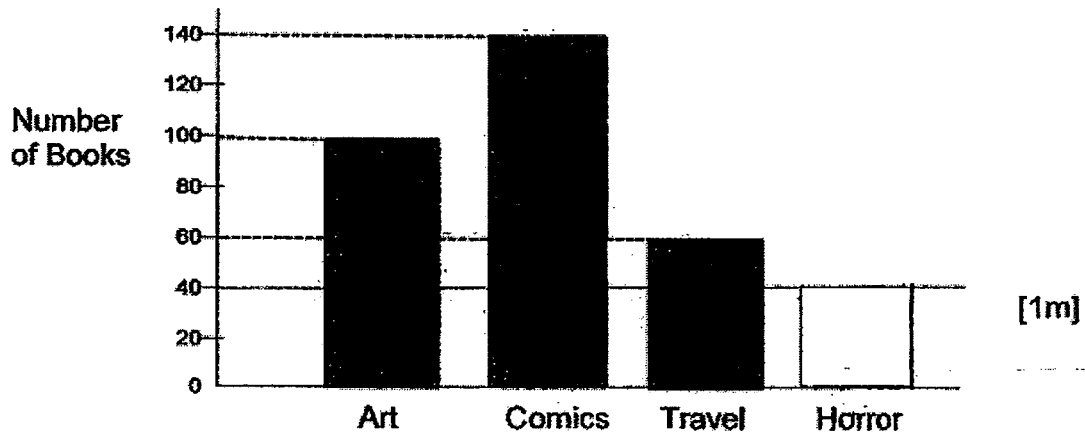
Ans: (b) _____ [2m]

- 7) The figure, not drawn to scale, is made up of Triangle BCD and Rhombus ABED. $\angle BCD$ is twice the size of $\angle CBE$. Find $\angle CBE$.



Ans: _____ [3m]

- 8) The bar graph below shows the number of books sold at a Book Sale.



- (a) There were $\frac{2}{3}$ as many Horror books as Travel books sold.
Draw a bar to represent the number of Horror books sold.
- (b) On average, each customer bought 4 books and all the books were sold.
How many customers were at the Book Sale?

Ans: (b) _____ [2m]

- 9) At a playground, 7 children took turns to sit on the three swings from 12 noon to 3.30 p.m. At any one time, all the three swings were occupied, one child to one swing, while the other 4 children waited. If each child had the same amount of playing time, how many minutes did each child play on the swing?

Ans: _____ [3m]

10) Joy and Tricia shared the total cost of a tablet.

Joy paid \$100 less than $\frac{2}{7}$ of the cost of the tablet.

Tricia paid \$536.

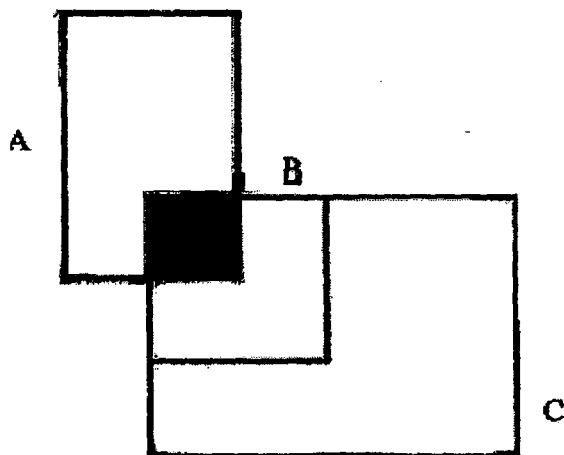
(a) How much did the tablet cost?

(b) How much did Joy pay?

Ans: (a) _____ [3m]

(b) _____ [1m]

- 11) The figure is made up of a square and two rectangles.
 The ratio of the area of Rectangle A to the area of Square B to the area of Rectangle C is $3 : 2 : 6$. $\frac{1}{4}$ of Square B is shaded.
- (a) What fraction of the figure is not shaded?
- (b) If the area of Rectangle C is 48 cm^2 , find the area of the figure.



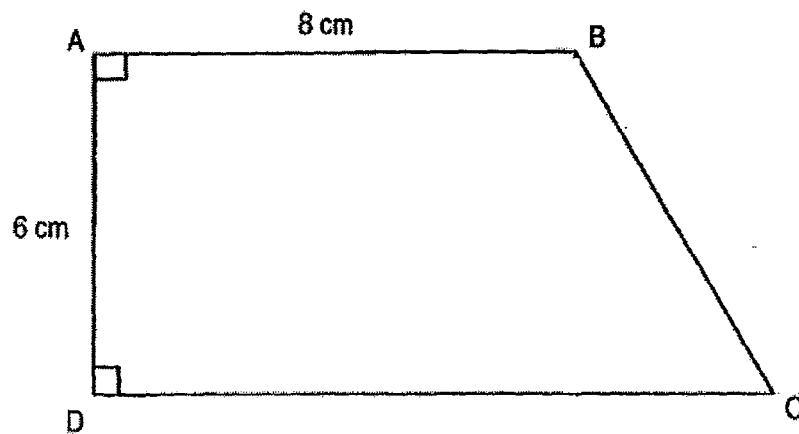
Ans: (a) _____ [2m]

(b) _____ [2m]

- 12) The average marks for a group of pupils was 13.
After Johana joined the group, their average marks became 15.
If Johana scored 35 marks, how many pupils were there at first?

Ans: _____ [3m]

- 13) The area of the trapezium is 60 cm^2 . $AB = 8 \text{ cm}$ and $AD = 6 \text{ cm}$.
Find the length of DC .



Ans: _____ [3m]

- 14) Alex had a total of 69 white and pink golf balls.
He gave away 27 pink golf balls and bought more white golf balls.
The number of white golf balls then increased by 60%.
Finally, he had a total of 72 golf balls.
How many pink golf balls did he have at first?

Ans: _____ [4m]

15) There were equal number of male and female goats at first.

7 male goats and 13 female goats were sold.

As a result, the ratio of the number of male to the female goats became 7:5.

(a) How many female goats were left?

(b) How many goats were there at first?

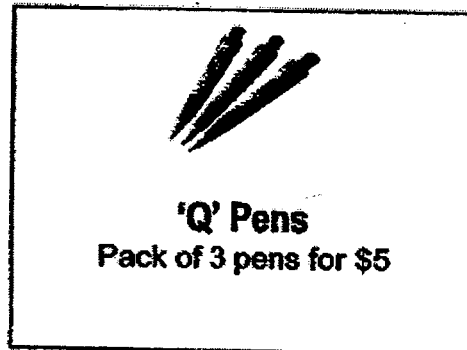
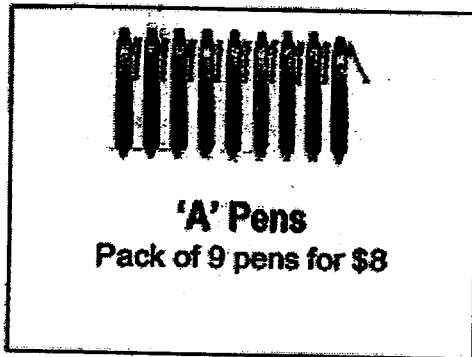
Ans: (a) _____ [3m]

(b) _____ [2m]

- 16) Joy and Eton shared some books. Joy's share was 30 less than Eton's share.
After Eton gave $\frac{1}{3}$ of his share to Joy, Joy had 12 more than Eton.
How many books did Joy have at first?

Ans: _____ [5m]

- 17) A bookshop sold two types of pens in packs at the prices shown below.



- (a) Adelyn spent a total of \$26 on some 'A' pens and 'Q' pens.
How many more 'A' pens did she buy?
- (b) The bookshop sold 360 pens last week.
The number of 'A' pens sold was 3 times the number of 'Q' pens sold.
How much money was collected from the sale of 'Q' pens last week?

Ans: (a) _____ [3 m]

(b) _____ [2 m]

- 18) The diagram below shows 4 figures formed by shaded and unshaded squares.



Figure 1



Figure 2

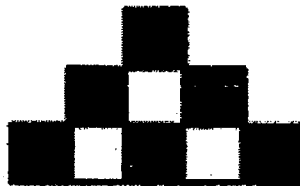


Figure 3

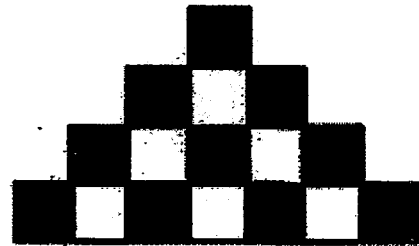


Figure 4

- (a) Complete the table below. [2]
 (b) Find the total number of squares in Figure 13 [1]
 (c) How many shaded squares are there in Figure 31? [2]

| Figure | Total number of squares | Total number of shaded squares |
|--------|-------------------------|--------------------------------|
| 1 | 1 | 1 |
| 2 | 4 | 3 |
| 3 | 9 | 6 |
| 4 | 16 | 10 |
| 5 | [A1] | [A1] |

Ans: (b) _____ [1m]

Ans: (c) _____ [2m]

ANSWER SHEET

EXAM PAPER 2016

SCHOOL :TAO NAN

SUBJECT : MATHEMATICS

TERM :SA1

ORDER CALL :

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

16)0.055 17)1/25 18)1 19)20% 20)4cm

21)15° 22)84 23)\$(1.5a) 24)18 25)21

26)\$1.15 27)\$25 28)17 29)84cm 30)80°

Paper 2

1) $9 \times 4 = 36$

$36 + 5 = 41$

She will be 41 years old.

2) $\frac{1}{2} \times \frac{3}{5} = \frac{3}{10}$

$\frac{3}{10}$ of the figure is shaded.

3) $3/3 - 1/3 = 2/3$ (left)

$2/3 \times 5/9L = 10/27L$

10/27L of water was left.

4) $2/5 \times 1 = 2/5$

$1/4 \times 2 = 2/8$

Meiling = $8/5$

Lily

8/5 of Lily's savings is Meiling savings.

5) $63 \div 8 = 7 \text{ R}7$

In column X.

6) a) $(6p \div 2) \times 3 = 9p$

b) $6p = 8 \times 6 = 48$

$3p = 48 \div 2 = 24$

$9p = 24 \times 3 = 72$

$72 \times \$0.20 = \14.40

a) There are 9p 20-cent stamps.

b) She spent \$14.40 on the 20-cent stamps.

7) $\angle EDB = (180^\circ - 100^\circ) \div 2 = 35^\circ$

$$\angle CBE + \angle BCD = 180^\circ - 35^\circ - 35^\circ - 32^\circ = 78^\circ$$

$$\angle CBE = 78^\circ \div 3 = 26^\circ$$

$\angle CBE$ is 26°

8)a) $2/3 \times 60/1 = 40$

b) Total no. of books $\rightarrow 100 + 140 + 60 + 40 = 340$

$$340 \div 4 = 85$$

There were 85 customers.

9) $210 \text{ mins} \div 7 = 30 \text{ mins}$

$$30 \text{ mins} \times 3 = 90 \text{ mins}$$

10)a) $5x = \$536 - \$100 = \$436$

$$7x = (\$436 \div 5) \times 7 = \$610.40$$

b) $2x = (\$610.40 \div 7) \times 2 = \174.40

$$\$174.40 - \$100 = \$74.40$$

a) The tablet cost \$610.40

b) Joy paid \$74.40

11)a) $16/17$

b) $12 \text{ units} = 48\text{cm}_2$

$$17 \text{ units} = (48\text{cm}_2 \div 12) \times 17 = 68\text{cm}_2$$

12)Of there are 10 pupils at first

$$10 \times 13 = 130$$

$$130 + 35 = 165$$

$$165 \div 11 = 15$$

There were 10 pupils at first.

13)8cm x 6cm =48cm₂

$$60\text{cm}_2 - 48\text{cm}_2 = 12\text{cm}_2$$

$$6\text{cm} \div 2 = 3 \text{ cm}$$

$$12\text{cm}_2 \div 3\text{cm} = 4\text{cm}$$

$$4\text{cm} + 8\text{cm} = 12\text{cm}$$

The length of DC is 12cm.

14)free point

15)a)7 units + 7 = 5 units + 13

$$2 \text{ units} = 13 - 7 = 6$$

$$5 \text{ units} = (6 \div 2) \times 5 = 15$$

b)12 units =(15 ÷ 5) x 12 = 36

$$36 + 20 = 56$$

a)15 female goats were left.

b)There were 56 goats at first.

16) $4 \text{ units} + 10 = 2 \text{ units} + 32$

$2 \text{ units} = 32 - 10 = 22$

$3 \text{ units} = (22 \div 2) \times 3 = 33$

Joy had 33 books at first.

17) a) $(\$5 \times 2) + (\$8 \times 2) = \$26$

$(9 \times 2) - (3 \times 2) = 12$

b) $(360 \div 4) \div 3 = 30$

$30 \times \$5 = \150

a) She bought 12 more 'A' pens.

b) \$150 was collected from the sale of 'Q' pens.

18) a) 25 , 15

b) $132 = 169$

c) $31 \div 2 \approx 16$

$16 \times 31 = 496$

b) There are 169 squares.

c) There are 496 shaded squares.

