ST. HILDA'S PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 1, 2012
MATHEMATICS
PRIMARY SIX
PAPER ONE
BOOKLET A

Name: _____ (   )

Class: P6 / _____

Marks: _____ / 20

Date: 3.5.2012

Parent's Signature: _____

Time for Booklets A and B: 50 minutes

You are **not** 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)

1   6 122 005 = 6 000 000 + _____ + 2 000 + 5

    (1)   120
    (2)   12 000
    (3)   100 000
    (4)   120 000

2   Round off 4 999 509 to the nearest thousand.

    (1)   4 999 500
    (2)   4 999 510
    (3)   4 999 600
    (4)   5 000 000

3   Express 0.025 as a percentage.

    (1)   0.25%
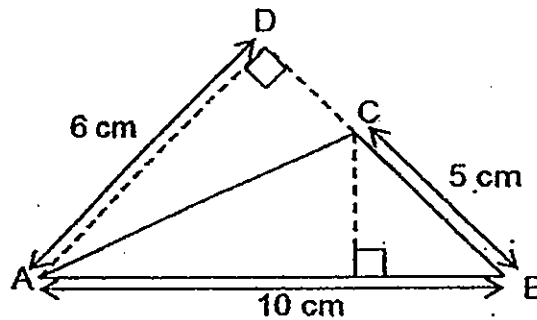   (2)   2.5%
    (3)   25%
    (4)   250%

4 Elroy saved $60 every two weeks.
How long did he need to save $720?

(1) 6 weeks
(2) 12 weeks
(3) 24 weeks
(4) 48 weeks

5 Simplify $8g - 8 + 2g + 6$

(1) $10g - 2$
(2) $10g + 2$
(3) $10g - 14$
(4) $10g + 14$

6 The figure below is not drawn to scale.

Find the area of triangle ABC.

(1) 15 cm^2
(2) 25 cm^2
(3) 30 cm^2
(4) 300 cm^2

7 What is 50 tens and 50 tenths?

(1) 50.50
(2) 500.50
(3) 505
(4) 550

8   Express 17 ÷ 8 as a fraction.

   (1) $\dfrac{8}{17}$

   (2) $1\dfrac{7}{8}$

   (3) $2\dfrac{1}{8}$

   (4) $8\dfrac{1}{8}$

9   2.75 l + 250 ml = _____ l

   (1)   5.25
   (2)   4.575
   (3)   3
   (4)   2.325

10   Which one of the following has the largest volume?

   (1)   A 1-litre bottle
   (2)   A cuboid which measures 12 cm by 8 cm by 9 cm
   (3)   A container which can hold 965 cm^3 of water
   (4)   A cube of sides 8 cm

11   The ratio of the perimeter of a square to the perimeter of an equilateral
     triangle is 2 : 5.
     If the area of the square is 144 cm^2, find the length of the side of the
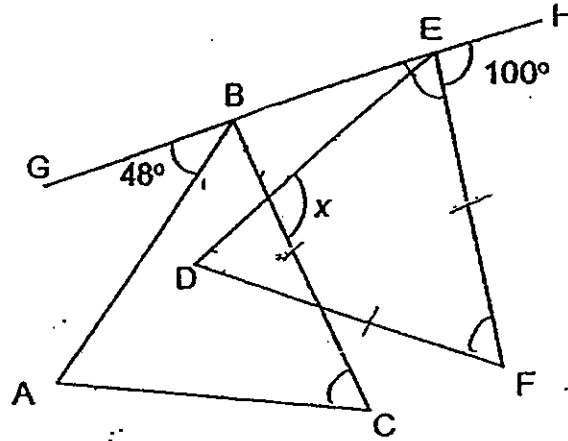   equilateral triangle.
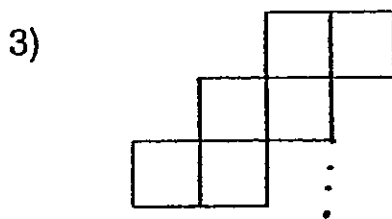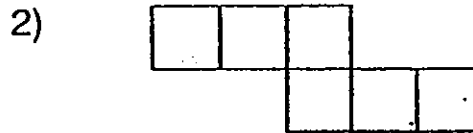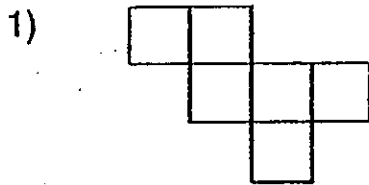   (1)   10 cm
     (2)   30 cm
     (3)   40 cm
     (4)   120 cm

12 In the diagram below, ABC and DEF are equilateral triangles.
GBEH is a straight line.
$\angle GBA = 48°$ and $\angle HEF = 100°$
Find $\angle x$.

(1) 72°
(2) 88°
(3) 92°
(4) 98°

13 Which one of the following is not a net of a cube?

1)

2)

3)

4)

14 $\frac{1}{5}$ of Ali's money is $\frac{2}{3}$ of Gopal's money.

Express Ali's money as a fraction of Gopal's money.

(1) $\frac{10}{3}$

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

(3) $\frac{10}{13}$

(4) $\frac{3}{10}$

15 5 girls have an average mass of 32 kg.
When a new girl joins the group, their average mass increases to 35 kg.
What is the mass of the new girl?

(1) 15 kg
(2) 18 kg
(3) 30 kg
(4) 50 kg

END OF BOOKLET A
Proceed to Booklet B

ST. HILDA'S PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 1, 2012
MATHEMATICS
PRIMARY SIX -
PAPER ONE
BOOKLET B

Name: _____ (   )

Class: P6 / _____   Marks: _____ / 20

Date: 3.5.2012   Parent's Signature: _____

Time for Booklets A and B: 50 minutes

You are not allowed to use a calculator.

Questions 16 to 25 carry 1 mark 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)

16    $25 \times 24 + 24 = 33 \times 24 -$ _____ $\times 24 + 3 \times 24$
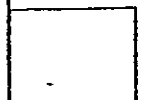
Ans: _____

17   Express 50 g as a percentage of 2 kg.

Ans: _____ %

18   An apple costs n ¢.
How much change would Farhan get if he paid $10 for buying 7 apples?
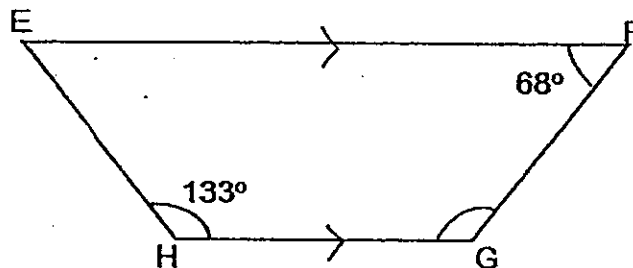
Ans: $ _____

19 Siew Leng had 12 red marbles, 18 green marbles and 36 blue marbles. Find the ratio of her red marbles to her green marbles to her blue marbles.

Give your answer in its simplest form.

Ans: _____

20 The figure below is not drawn to scale.
EFGH is a trapezium.
EF // GH.
Find ∠FGH.

Ans: _____

21 How many sixths are there in $2\frac{1}{3}$?

Ans: _____

22 If $\dfrac{3}{4}$ of a number is 12, what is $\dfrac{1}{3}$ of the number?
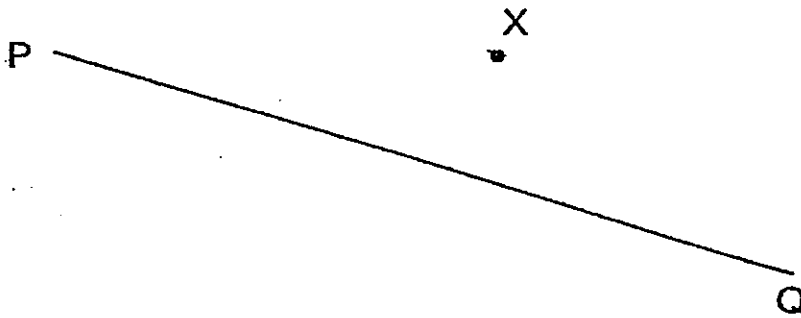
Ans: _____

23 Express $2\dfrac{7}{9}$ as a decimal.

Round off your answer correct to 2 decimal places.

Ans: _____

24 Draw a line AB parallel to the line PQ passing through point X.

X

P

Q

25 A box measures 16 cm by 18 cm by 12 cm.
How many 3-cm cubes can fit into the box?

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   Joanne had $200 more than Danny.
      If Danny gave $30 to Joanne, the ratio of Joanne's money to Danny's
      money would be 14 : 1.
      How much money did Danny have?

                                        Ans: $ _____

27   The figure below shows 4 different triangles within a rectangle.
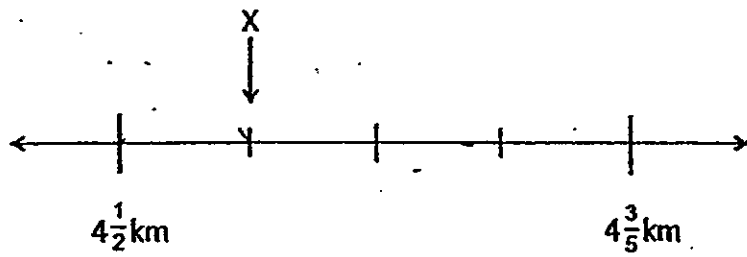   Find the area of triangle A.

      17 cm²
      A
      37 cm²
      39 cm²
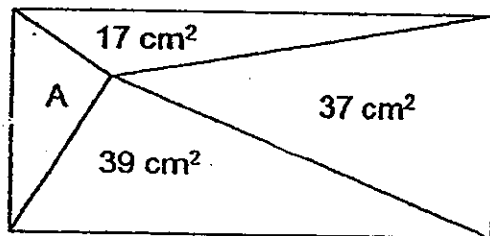
                                        Ans: _____ cm²

28   A packet contained 1.25 *l* of fruit juice.
      Susan drank $\frac{3}{5}$ of it.
      How much juice was left?
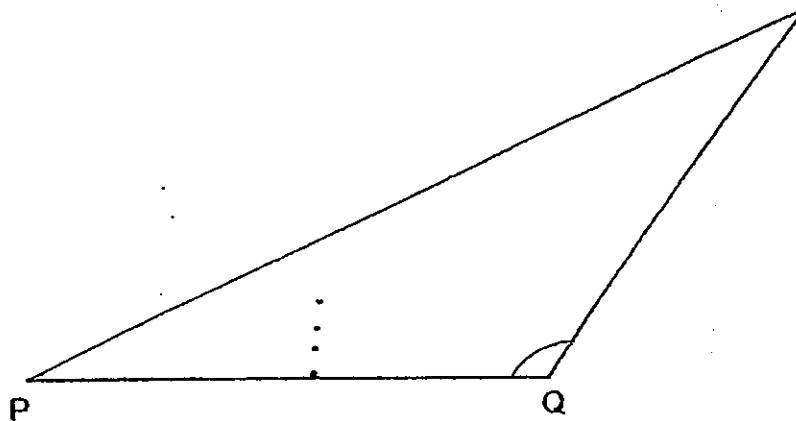
                                        Ans: _____ *ml*

29 Find the value of X.

$4\frac{1}{2}$ km $4\frac{3}{5}$ km

Ans: _____ km _____ m

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30 Draw a triangle PQR, in which QR= 6 cm and PQR = 125°.
The line PQ has been drawn for you.

P   Q

END OF BOOKLET B
Have you checked your work carefully?

ST. HILDA'S PRIMARY SCHOOL
SEMESTRAL ASSESSMENT 1, 2012
MATHEMATICS
PRIMARY SIX
PAPER TWO

Name: _____ . (‾)

Class: P6 / _____   Marks: _____ / 60

Date: 3.5.2012   Parent's Signature: _____

Time: 1 hour 40 minutes
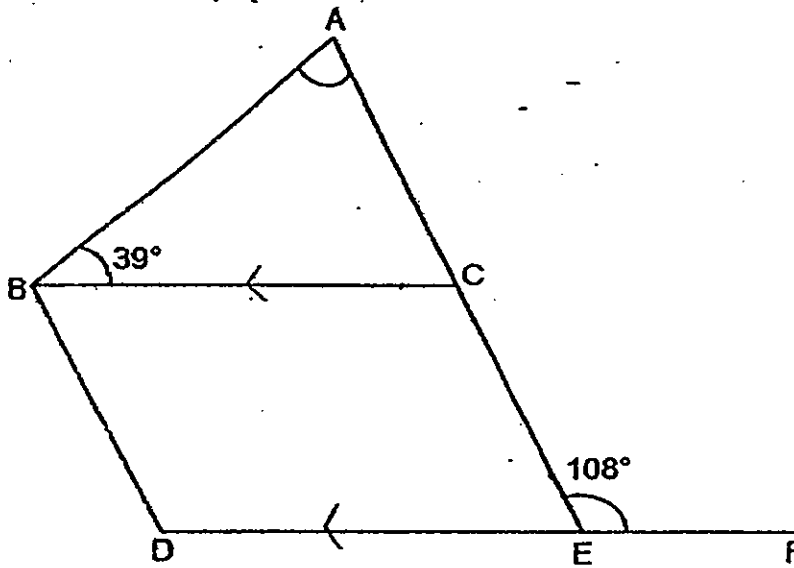
You are allowed to use a calculator.

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   The surface area of a cube is 384 cm².
Its net is shown below.
Find the perimeter of the net of the cube.
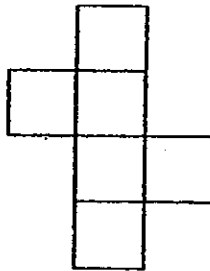
Ans: _____ cm

2 In the figure below, not drawn to scale, BCED is a parallelogram. ACE and DEF are straight lines, $\angle CEF = 108°$ and $\angle ABC = 39°$. Find $\angle BAC$.
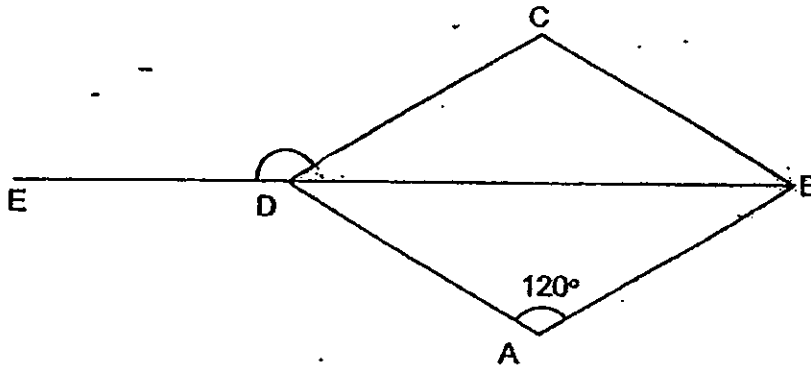

Ans: _____

3 The total height of 3 boys is the same as the total height of 5 girls. If the average height of the 3 boys is 1.8 m, what is the difference between the average height of a boy and the average height of a girl?
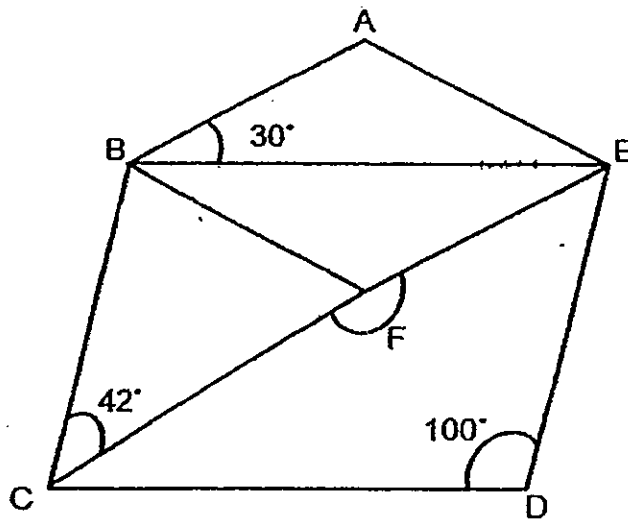
Ans: _____ m

4 The figure below, not drawn to scale, shows a rhombus ABCD.
   EDB is a straight line.
   Find $\angle$ EDC.

C

E   D   →B

120°

A

Ans: _____

5 The figure below is not drawn to scale.
   ABFE is a rhombus.
   BEDC is a parallelogram.
   Find $\angle$CFE.

A

B   30°   E

42°   F

100°

C   D

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   Two identical square paintings are mounted on a rectangular frame as shown below.
The border around each square painting is w cm wide.
Each painting has an area of 1024 cm^2.

(a)   Find the length of the frame in terms of w.

(b)   Find the area of the rectangular frame if $w = 5$.

Area = 1024 cm^2 Area = 1024 cm^2
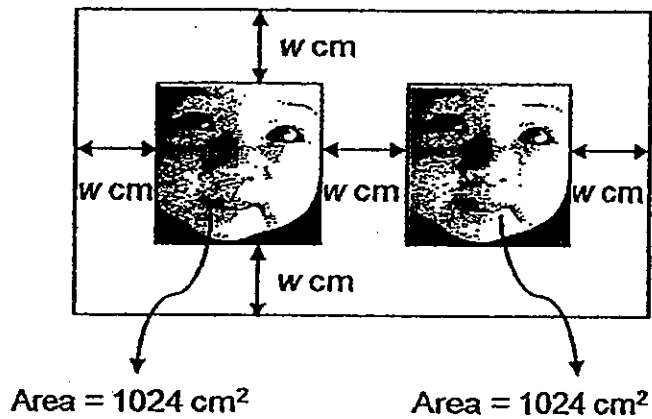
Ans: (a) _____ [1]

(b) _____ [2]

7   The ratio of Jim's savings to Ken's savings is 1 : 2.
    Jim received some money and his savings increased by 60%.
    What percentage of Ken's money must be decreased so that their
-   savings are equal?-

Ans: _____ [3]

8   The table below shows the parking charges for cars at XYZ Mall carpark.

First hour	$2.20
Every additional $\frac{1}{2}$ hour or part thereof	$0.60

Cindy parked her car from 11.15 a.m. to 2 p.m.
If she had a $2 parking discount, how much would she have to pay?

Ans: _____ [3]

9 A rectangular tank was filled with water flowing from a tap.
At 10 a.m. the tank was empty.

At 1 p.m. the tank was $\frac{1}{3}$ filled with water.

At what time would the tank be $\frac{7}{12}$ filled with water flowing from the tap?

Ans: _____ **[3]**

10 Habri had some 20¢-coins and 50¢-coins.

He spent $\frac{1}{4}$ of his 20¢-coins and 40% of his 50¢-coins.

The value of 20¢-coins left was the same as the value of 50¢-coins left.
If the difference between the value of 20¢-coins and the value of 50¢-coins he had at first was $12, how much did Habri have at first?
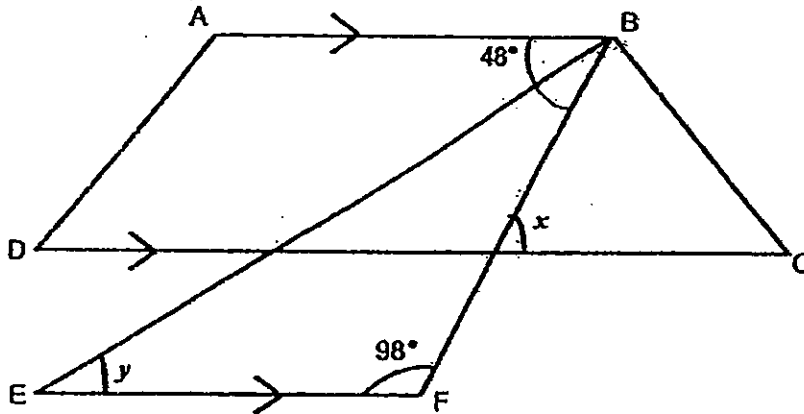
Ans: _____ **[4]**

11 The figure below is not drawn to scale.
It is made up of a trapezium ABCD and a triangle BEF.
DC // EF.

(a)   Find $\angle x$.

(b)   Find $\angle y$.

Ans: (a) _____ [1]

        (b) _____ [2]

12 Study the table below carefully.

	A	B.	C	D	E	F
Row 1	1	2-	3	-4	5-	6
Row 2	12	11	10	9.	·8	7
Row 3	13	14	15	16	17	18
Row 4	24	23	22	21	20	19

(a) What is the largest number in Row 20? [1]

Ali has a 4-square grid window cut-out.
He places it as shown below.

	A	B	C	D	E	F
Row 1	1	2	3	4	5	6
Row 2	12	11	10	9	8	7
Row 3	13	14	15 :	16	17	18
Row 4	24	23	22	21	20	19

He finds the sum of the numbers in Rows 1 and 2 of the square grid placed over is always 26.

(b) What would be the sum of four numbers in Rows 3 and 4 of the square grid placed over? [1]

(c) If the pattern continues, what is the smaller number of the 2 rows if the sum of four numbers is 242? [2]

Ans: (a) _____ [1]

(b) _____ [1]

(c) _____ [2]

13 $\frac{3}{5}$ of Bette's money is $324 more than $\frac{3}{4}$ of Tina's money.
Bette has twice as much money as Tina.

(a)   How much does Tina have?

(b)   How much does Bette have?

Ans: (a) _____ [2]

(b) _____ [2]

14 Alice had some apples and bananas.

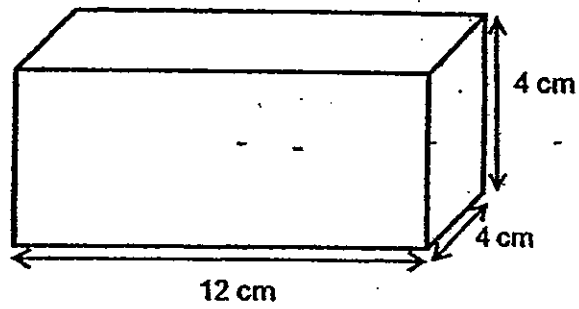$\frac{3}{4}$ of the apples and $\frac{6}{7}$ of the bananas are in good condition.

$\frac{9}{11}$ of the good fruits are apples.

If the number of apples Alice had was 522 more than bananas, how many fruits did Alice have in all?

Ans: _____ [4]

15

4 cm

4 cm

12 cm

Dana has 15 such iron blocks as above.
She melts all the iron blocks to form a large square-based cuboid.
If the height of the new cuboid is 80 cm, find the total surface area of the new cuboid.

Ans: _____ [4]

16 Mary bought some red marbles and gave half to Noel.
Noel bought some blue marbles and gave half to Mary.
Mary lost 16 red marbles and Noel lost 55 blue marbles.
The ratio of Mary's red marbles to blue marbles became 18 : 85 and the
ratio of Noel's red marbles to blue marbles became 7 : 20.
How many red marbles did Mary buy?

Ans: _____ [5]
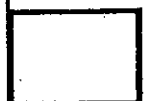
17 Container A and Container B contained some sand.

If $626\dfrac{5}{8}$ g of the sand is removed from Container A, the mass of the sand in Container A will be 25% that of the sand in Container B.

If 179 g of the sand is removed from Container B, the mass of the sand in Container B will be $58\dfrac{1}{3}$% that of the sand in Container A.

What is the mass of the sand in Container A?

[5]

18 There were 846 glasses in a basket.
Some of the glasses were found to be broken and thrown away.

Of the remainder, $\frac{2}{3}$ of the glasses were sold and $\frac{1}{4}$ of the glasses

was given away.
There were 56 glasses left.

(a)   How many glasses were sold?

(b)   What fraction of the glasses in the basket were thrown away?

Ans: (a) _____ [3]

         (b) _____ [2]

END OF PAPER TWO
Have you checked your work carefully?
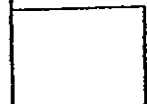
Paper 1

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

16. 10

17. 2.5

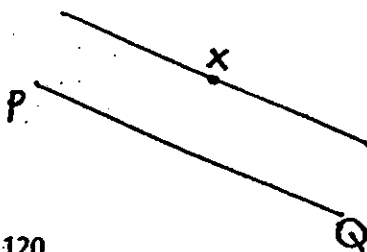18. $(10 - \frac{7}{100})$

19. 2 : 3 : 6

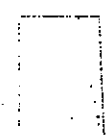20. 112

21. 14

22. 5⅓
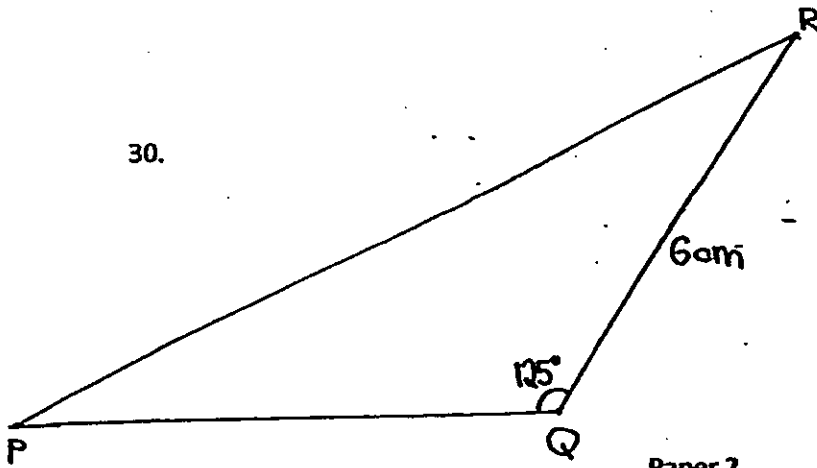
23. 2.78

24.

25. 120

26. 17.70

27. 19

28. 500

29. 4 km 525 m

30.

P   Q

1. 112

2. 69

3. 0.72

4. 150

5. 172

6. (a) $(64 + 3w)$ cm
   (b) 3318 cm^2

7. 60% x 50 = 30
   30 + 50 = 80
   100 − 80 = 20
   $(20 \div 100)$ x 100 = <u>20%</u>

8. 2.2 + 0.6 + 0.6 + 0.6 + 0.6 = 4.60
   4.6 − 2 = <u>$2.60</u>

9. $\frac{1}{3} \div 3 = \frac{1}{9}$
   $\frac{7}{12} - \frac{1}{3} = \frac{1}{4}$
   $\frac{1}{4} \div \frac{1}{9} = 2.25$
   0.25 h = 15 mins
   <u>3.15 pm</u>

10. 4 − 1 = 3
    6 → 60%
    40% → 4
    10 x 50 = 500
    20 x 20 = 400
    $12 = 1200¢
    500 − 400 = 100
    1200 ÷ 100 = 12
    120 x 50 = 6000
    240 x 20 = 4800

$6000 + 2800 = \underline{10800¢}$

11. (a) $180° - 98° = \underline{82°}$
    (b) $82° - 48° = 34°$
       $82° - 34° = \underline{48°}$

12. (a) $20 \times 6 = \underline{120}$
    (b) $13 + 14 + 24 + 23 = \underline{74}$
    (c) $242 \div 2 = 121$
       $121 - 11 = 110$
       $110 \div 2 = \underline{55}$

13. (a) $\frac{5}{6}B = \frac{3}{4}T + 324$
       $12B = 15T + 6480$
       $B = 2T$
       $24T = 15T + 6480$
       $24T - 15T = 6480$
       $9T = 6480$
       $1T = 6480 \div 9 = \underline{\$720}$
    (b) $\$720 \times 2 = \underline{\$1440}$

14. $4 \times 3 = 12$
    $11 - 9 = 2$
    $11 \times 3 = 33$
    $12 \times 3 = 36$
    $9 \times 3 = 27$
    $36 - 7 = 29$
    $522 \div 29 = 18$
    $36 + 7 = 43$
    $43 \times 18 = \underline{774 \text{ fruits}}$

15. $4 \times 4 \times 12 = 192$
    $192 \times 15 = 2880$
    $2880 \div 80 = 36$
    $36 = 6$
    $6 \times 80 = 480$
    $480 \times 2 = 960$
    $960 + 36 = 996$
    $996 \times 2 = \underline{1992 \text{ cm}^2}$

16. $7N = 18M + 16$
    $85M = 20N + 55$
    $140n = 360M + 320$
    $595M = 140N + 385$
    $595M = 360M + 320 + 385$
    $595M - 360 = 705$
    $M = 705 \div 235 = 3$
    $3 \times 18 = 54$

$54 + 6 = 70$

$70 \times 2 = \underline{140}$

17. $58\frac{1}{3}\% \rightarrow \frac{7}{12}$

$\frac{1}{4}B + 626\frac{5}{8} \rightarrow A$

$\frac{7}{12}A + 179 \rightarrow B$

$\frac{41}{48}A \rightarrow 671\frac{1}{8}$

$A \rightarrow 671\frac{1}{8} \div 41 \times 48 = \underline{786g}$

18. (a) $\frac{2}{3} + \frac{1}{4} = \frac{11}{12}$

$1 - \frac{11}{12} = \frac{1}{12}$

$\frac{2}{3} = \frac{8}{12}$

$56 \times 8 = \underline{448}$

(b) $56 \times 12 = 672$

$846 - 672 = 174$

$\frac{174}{846} = \underline{\frac{29}{141}}$