NANYANG PRIMARY SCHOOL

FIRST SEMESTRAL EXAMINATION 2014

PRIMARY 6

MATHEMATICS

PAPER 1

DURATION: 50 MINUTES

Booklet A	**/ 20**	**Paper 1 Total:**	
Booklet B	**/ 20**	**/ 40**	

Name: _____ ( )

Class: Primary 6 ( )

Date: 9th May 2014

Parent's Signature:_____

Any query on marks awarded should be raised by <u>20 May 2014.</u> We seek your understanding in this matter as any delay in the confirmation of marks will lead to delays in the generation of results.

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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 oval (1, 2, 3 or 4) on the Optical Answer Sheet.

(20 marks)

1   Which one of the following is the lowest common multiple of 4 and 6?

      (1)   1

      (2)   2

      (3)   12

      (4)   24

2   Find the value of $349 \div 8$.

      (1)   43

      (2)   43.5

      (3)   43.525

      (4)   43.625

**3**   Peter's salary of $3000 was increased by 20%. How much is his salary now?

    (1) $360

    (2) $600

    (3) $2400

    (4) $3600

4   Roy draws a 4-sided figure. Only one pair of its opposite sides is parallel.

    Which one of the following is the name of the 4-sided figure that Roy has drawn?

    (1)   Parallelogram

    (2)   Rectangle

    (3)   Rhombus

    (4)   Trapezium

5   In the figure below, LMN is a straight line.
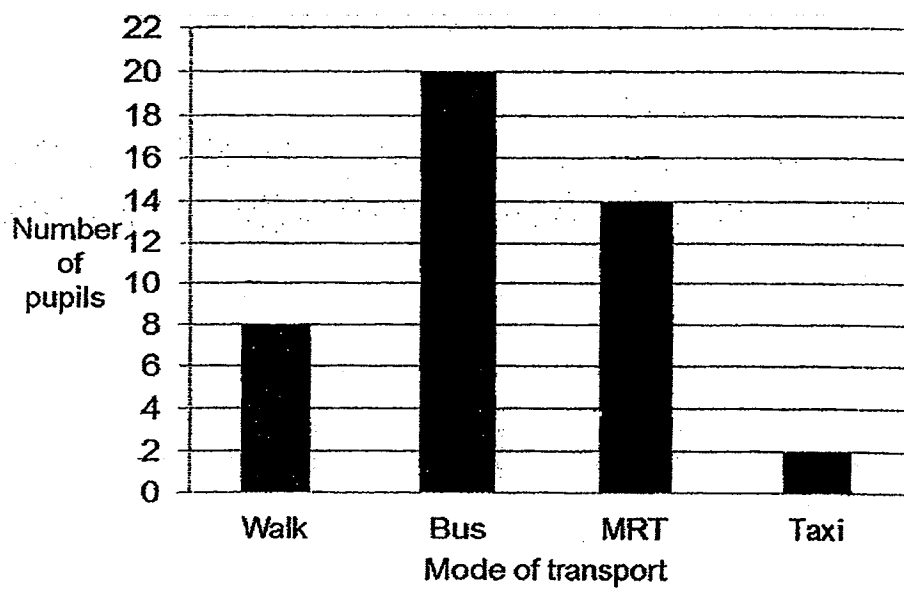   What is the area of triangle KLM?
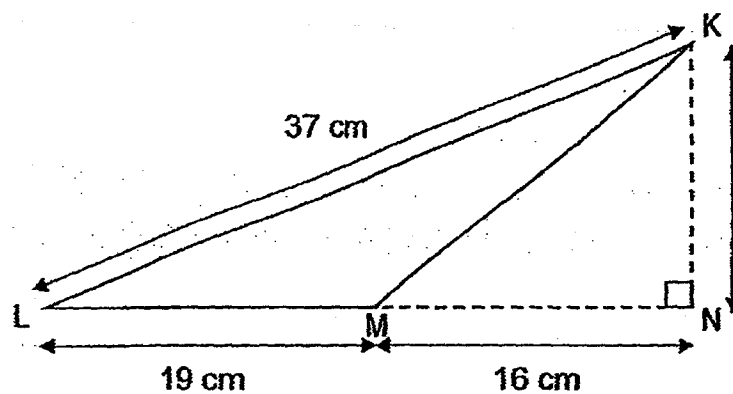
(1)   84 cm^2

(2)   114 cm^2

(3)   222 cm^2

(4)   228 cm^2

6   Simplify the following algebraic expression.

         $18 + 13a + 2 - 10a$

(1) $16 + 3a$

(2) $16 - 3a$

(3) $20 + 3a$

(4) $20 - 3a$

7   The graph below shows how a group of pupils travels to school. How many more pupils take bus and MRT than walk to school?

(1)   12

(2)   26

(3)   34

(4)   44

8   Mary bought some flour. She used $\frac{1}{3}$ of the flour to bake a cake and $\frac{2}{5}$ of the flour to make some muffins. What fraction of the flour was left?

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

(2) $\frac{4}{5}$

(3) $\frac{4}{15}$

(4) $\frac{11}{15}$

9   Miss Lee bought a refrigerator for $1070, inclusive of 7% GST. How much did she pay for the GST?

(1) $10

(2) $70

(3) $1000

(4) $1040

10 In a box, there are only red and blue marbles. The ratio of the number of red marbles to the number of blue marbles is 3 : 5. There are 60 red marbles. How many marbles are there in the box?

(1)   20

(2)   40

(3)   100

(4)   160

11 Find the perimeter of a semicircle of radius 10 cm.

(Take $\pi = 3.14$)

(1)   31.4 cm

(2)   41.4 cm

(3)   51.4 cm

(4)   62.8 cm

12 Arrange the following numbers from the largest to the smallest.

$$7, \ 7.7, \ 7.07$$

   (1)   7.7 , 7.07 , 7

   (2)   7.7 , 7 , 7.07

   (3)   7 , 7.07 , 7.7

   (4)   7.07 , 7.7 , 7

13 Sam had $\frac{2}{3}$ as many stickers as John. John had $\frac{7}{4}$ as many stickers as Peter. Peter had 24 stickers. What was the total number of stickers Sam and John had?
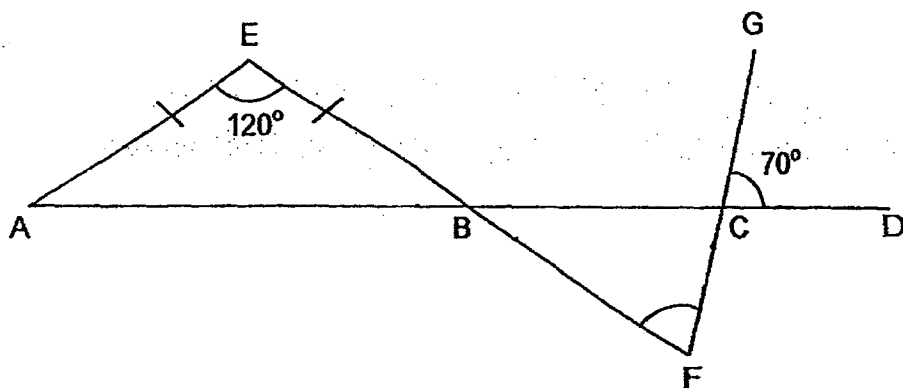
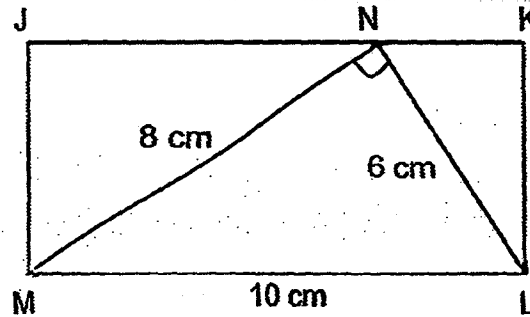   (1)   52

   (2)   66

   (3)   70

   (4)   94

14 In the figure below, ABCD, EBF and FCG are straight lines.
∠AEB = 120°, ∠DCG = 70° and EA = EB.   Find ∠EFG.

(1)   80°

(2)   70°

(3)   60°

(4)   50°

15 In the figure below, JKLM is a rectangle and MNL is a right-angled triangle. MN = 8 cm, LN = 6 cm and LM = 10 cm. Find the length of KL.

(1)   2.4 cm

(2)   4.8 cm

(3)   3 cm

(4)   4 cm

Name: _____(   )   Class: Pr 6 (   )

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. Belinda is $3k$ cm tall. Sharon is 3 times as tall as Belinda. Express the total height of the two girls in terms of k.

Ans: _____ cm

17. Find the difference between 4182 and 7609.

Ans: _____

18. Find the value of $24 - (5 + 8) - 3 + 2 \times 2$.

Ans: _____

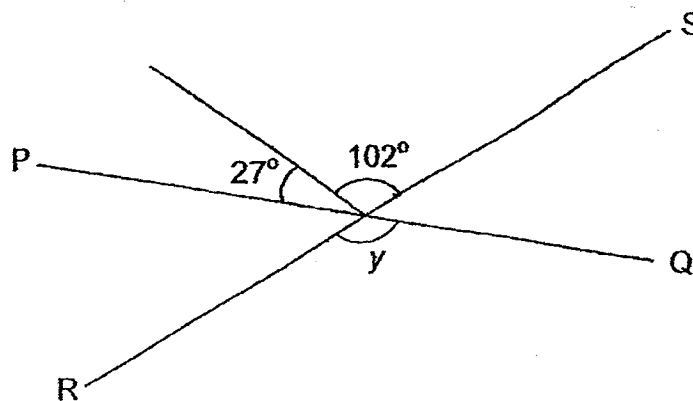**19** Express $3\frac{3}{50}$ as a decimal.

Ans: _____

---

20 Round off 766.849 to the nearest tenth.

Ans: _____

---

21 Express 5.5 cm in metres.

Ans: _____ m

---

22 In the figure below, PQ and RS are straight lines. Find $\angle y$.
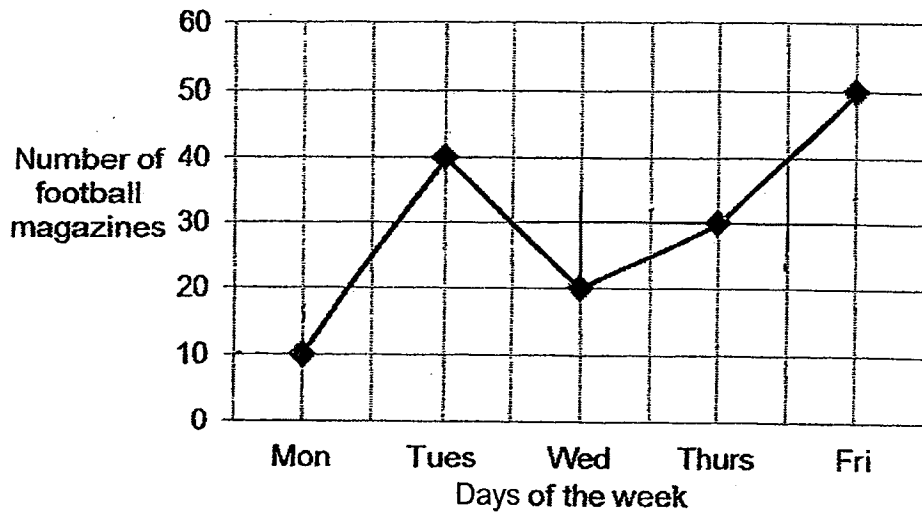

Ans: _____ °

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23   Pauline has $20 000 in a bank which pays 3% interest at the end of each year.   Find the amount of interest Pauline gets in a year.

Ans: $_____

24   The graph shows the number of football magazines sold during a 5-day period.   What is the total sales for the 5 days when each magazine costs $3?

Ans: $_____

25   The ratio of Mei Mei's money to Li Li's money was 3 : 2.   After Mei Mei
      spent $30, the ratio became 4 : 3.   How much money did Mei Mei have
      at first?

                                    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 total mass of 600 identical paper clips is 522 g.
      What is the total mass of 30 such paper clips?

Ans: _____ g

27   At first, Mrs Tan spent $\frac{1}{4}$ of her money on food and $50 on transport.

      She had $\frac{1}{3}$ of her money left. How much money did she have at first?

Ans: $_____

28 A jar filled with 300 identical marbles weighed 6150 g.
The same jar when filled with 100 such marbles weighed 2550 g.
What was the total mass of 400 such marbles?

Ans: _____ g

---

29 The figure below shows two identical circles with centres at G and H.
The radius of the circle is 14 cm. Find the perimeter of the shaded
part. (Take $\pi = \dfrac{22}{7}$)

Ans: _____ cm

15
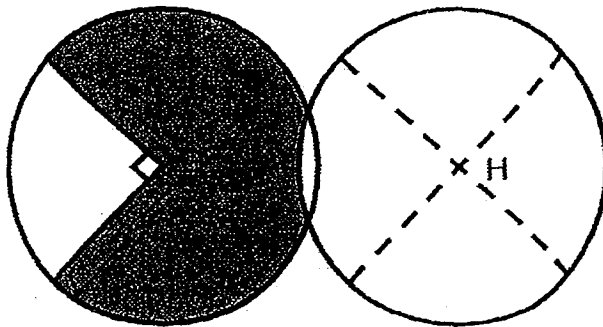
30 Bala bought two watermelons and five mangoes. The average mass of the watermelons is 3 kg 500 g and the average mass of the mangoes is 600 g. Find the total mass of the fruits he bought. Express your answer in kg.

Ans: _____ kg

END OF PAGER

END OF PAPER

NANYANG PRIMARY SCHOOL

FIRST SEMESTRAL EXAMINATION
2014

PRIMARY 6

MATHEMATICS

PAPER 2

DURATION: 1 HOUR 40 MINUTES

Paper 2 Total	/ 60

GRAND TOTAL	/ 100

Name: _____ (   )

Class: Primary 6 (   )

Date: 9th May 2014

Parent's Signature:_____

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PAPER 2

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   Cindy has a total of 210 balls in a box. She has 42 red balls, 28 green balls and the rest are yellow balls. What is the ratio of the number of red balls to the number of yellow balls? Leave your answer in the simplest form.

Ans: _____

2   Samantha saved $m. Doris saved $(40 + m) more than Samantha. Julie saved $24 less than Doris. Find the total savings of the three girls when m = 50.

Ans: $ _____

1

3   Jake's salary is half of Ali's salary but thrice of Kumar's salary. Express Kumar's salary as a fraction of Ali's salary.

Ans: _____

4   Two sides of a parallelogram PQRS have been drawn in the square grid shown below.   Complete the drawing of the parallelogram PQRS.
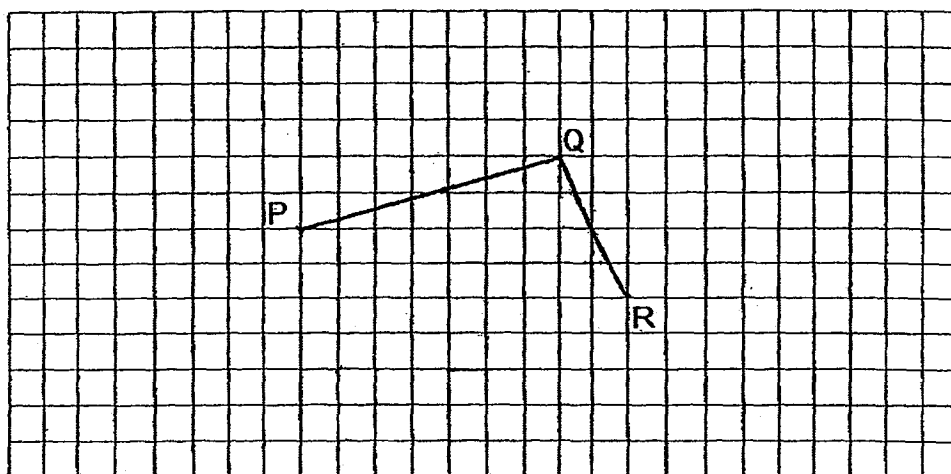
5   The perimeter of a rectangle is 336 cm.   Its length is thrice its breadth. Find its length.

Ans: _____ cm

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)

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6   Mrs Rajaratnam has 12.5 m of thread.   She cuts the thread equally into shorter pieces.   Each of the shorter pieces measures 2 m.

(a)   How many 2-m pieces are there?

(b)   What is the length of the remaining piece?
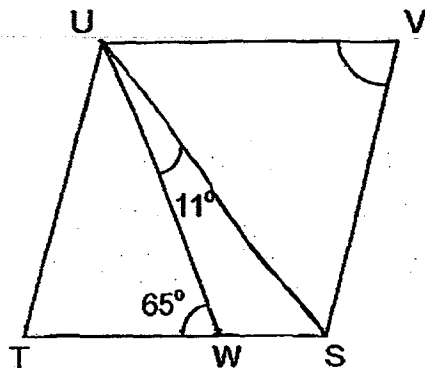
Ans: (a) _____ [1]

      (b) _____ [2]

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7   $\frac{1}{4}$ of Abdullah's age is equal to $\frac{2}{3}$ of Hussein's age.   The ratio of Hussein's age to Siti's age is 2 : 3.   Abdullah is 42 years older than Siti. How old is Hussein?
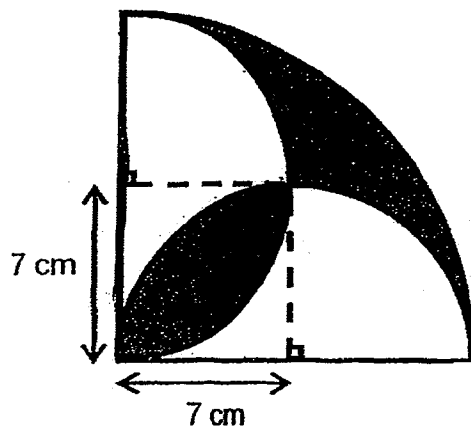
Ans: _____ [3]

8 In the figure below, STUV is a rhombus.
∠UWT = 65° and ∠WUS = 11°.   Find ∠SVU.

U   V

11°

65°
T   W   S

Ans: _____ [3]

---

9 The figure below is made up of a quadrant and 2 identical semicircles. The radius of the semicircle is 7 cm.   Find the total area of the shaded parts.

(Take $\pi = \dfrac{22}{7}$)

7 cm

7 cm

Ans: _____ [3]

4

10 The graph shows the number of brownies sold by Mrs Smith from Monday to Friday. Each brownie was sold for the same price. The total amount of money collected for the first 5 days of the week was $520. She collected $200 on Saturday. How many brownies did she sell on Saturday?

Number of brownies sold / Days of the week

Mon   Tues   Wed   Thurs   Fri   Sat
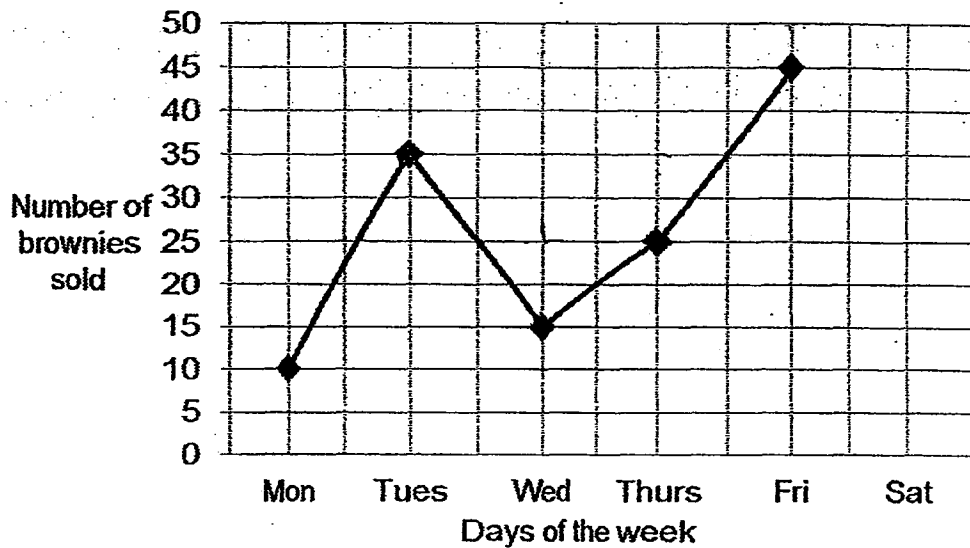
Ans: _____ [3]

11   Melissa collected some beads. 20% of them were golden beads. $\dfrac{9}{20}$ of them were silver beads and the rest were bronze beads. There were 300 more bronze beads than golden beads. How many beads did she collect altogether?

Ans: _____ [4]

12   Justina had 72 more Singapore stamps than Malaysian stamps.   She

gave away some Singapore and Malaysian stamps.   The number of

Singapore stamps she gave away was $\frac{3}{4}$ of the number of Malaysian

stamps she had at first.   The number of Malaysian stamps she gave

away was $\frac{1}{2}$ the number of Singapore stamps she had at first.   In the

end, she had an equal number of each type of stamps.   How many

Singapore stamps did Justina have at first?

Ans: _____ [4]

13 Look at the pattern below carefully.

(a) Draw the ♡ in the correct position(s) in the 35th column. [1]

   1st   2nd   3rd   4th   5th   6th   7th   8th   9th   ...   35th

(b) What is the total number of ♡ in the first 43 columns?

Ans: (b) _____ [3]

8

14 The number of toy cars Keith had was $\frac{1}{5}$ the number of paper

aeroplanes. After he gave $\frac{1}{2}$ of his paper aeroplanes and $\frac{1}{3}$ of his

toy cars to his brother, he had 286 more paper aeroplanes than toy cars.

(a) How many toy cars did Keith have in the end?

(b) How many toy cars and paper aeroplanes did Keith have at first?

Ans: (a) _____ [3]

(b) _____ [2]

15   In a boutique, 40% of the clothing are dresses. 70% of the remainder are skirts and the rest are pants. There are 30 more skirts than dresses. After some dresses are sold, 25% of the remaining clothing in the boutique are dresses. How many dresses are there left in the boutique?

Ans: _____ [5]

16   The ratio of Isabella's savings to Joanna's savings was 9 : 8. Isabella and Joanna shared the cost of buying a birthday present for their grandmother in the ratio of 2 : 1 respectively. Isabella used up $\frac{2}{3}$ of her savings to pay for her share of the present. Joanna was left with $150 after paying her share.
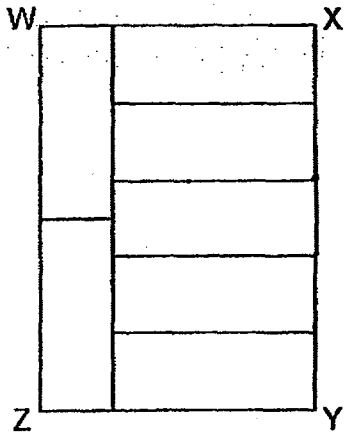
(a)   How much was Joanna's savings?

(b)   What was the cost of the present?

Ans: (a) _____ [4]

         (b) _____ [1]

17 The figure below shows Rectangle WXYZ which is made up of 7 identical small rectangles. The area of a circle with radius 56 cm is 2.2 times the area of Rectangle WXYZ. Find the perimeter of Rectangle WXYZ. (Take $\pi = \dfrac{22}{7}$)

Ans: _____ [4]

18   Meng has a total of 1296 black and white buttons. He has 720 more black buttons than white buttons. He puts all the black buttons equally into empty black boxes and puts all the white buttons equally into empty white boxes. There are thrice as many black boxes as white boxes. Each black box contains 4 more buttons than each white box. How many buttons are there in each white box?

Ans: _____ [4]

Paper 1:

Section A:

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

Q11	Q12	Q13	Q14	Q15					
3	1	3	1	2					

Section B:

Q16.   12k

Q17.   3427

Q18.   12

Q19.   3.06

Q20.   766.8

Q21.   0.055

Q22.   129

Q23. $600

Q24. $450

Q25. $270

Q26.   26.1

Q27. $120

Q28.   7200g

Q29.   94cm

Q30.   10kg

Paper 2:

Q1.   R→42
       G→28
       Y→140

       R : Y
       42:140
       → 3:10

Q2.   S→ $50
       D→40 + (50x2)
       J→16 + (50x 2)

       $116 + $140 + $50 → $306

Q3.   J : A : K
       1 : 2
       3 : 6 : 1

       K : A
       → 1:6

Q4.
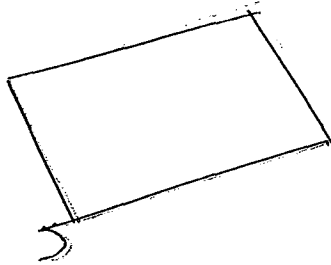
Q5.   L : B
       2 : 1
       3 : 1

       Total: (Lx2) + (Bx2) → 336
              3x 2 + 1 x 2 = 8
              336 ÷ 8 = 42
              42 x 3 → 126cm

Q6a) $12.5 \div 2 = 6$ R0.5
            → 6

Q6b) $12.5 - 12 = 0.5$m

Q7)   1/4 of A = 2/3 of H
          2/8 of A = 2/3 of H

          A → 8 units   A → 16 units
          H → 3 units   H → 6 units
                             S → 9 units

          16 units − 9 units = 7 uits
          42 = 7 units
          6 units → 36

Q8.   Angle WUV → 65°
          Angle SUV → 65 -11 = 54
          Angle UWS → 180 − 65 = 115
          Angle USW → 180 -11 -115 = 54
          Angle SVU → 180 − 54 -54 → 72°

Q9.   7 x2 − 14
          ¼ x 14 x 14 x 22/7   → 154

           2 x ¼ x 7 x 7 x 22/7 = 77
          77 ÷ 2 = 38.5

          7 x 7 = 49
          49 − 38.5 = 10.5
          10.5 x 2 = 21

          154 − 21 − 77 → 56cm²

Q10.   45 + 25 + 15 + 35 + 10 = 130
          $520 ÷ 130 = $4 (1 brownie)
          $200 ÷ $4 → 50

Q11.   Total: 20 units
          Silver → 9
          Gold → 4
          Bronze → 7

          2   units → 300
          1 unit → 100
          20 units → 2000

Q12.   72 + 36 = 108
108 = 1 unit
4 units → 432
432 + 72 → 504

Q13a)

	2nd	3rd	4th	5th	6th	7th	8th	9th	...	35th
♡		♡	♡	♡		♡	♡	♡		♡
	♡	♡	♡		♡	♡	♡			♡
♡		♡		♡		♡		♡		♡

Q13b) Every 4 column   → 2 + 1 + 3 + 2
→ 8

Every 40 column   → 80

80 + 2 + 1 + 3 → 86

Q14a) TC : PA   TC : PA
1 : 5   6 : 30

                    -1/3   -1/2
_____

Left   4 : 15

15 - 4 = 11
11 units → 286
1 unit → 26

3 units → 104

Q14b) At first: 36 units

26 x 26 → 936

Q15)

Total
 — 4/10 (Dress)
 — 6/10 (Remainder)
   — 70% (Skirts) 4.2 units
   — 30% (Pants)
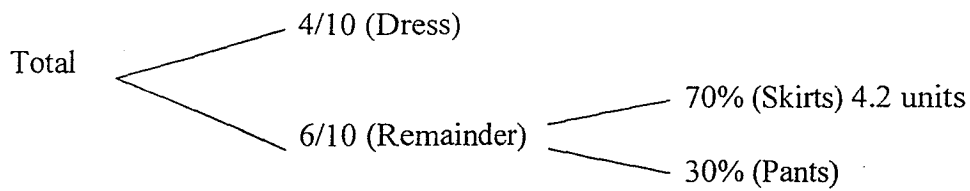
0.2 units → 30
1 unit → 150
6 units → 900

900 ÷ 75 x 25 → 300

Q16a)

	I	:	J		Spent
	9	:	8		I : J
					2 : 1

Used   6 : 3
Left   3 : $150

4 units → $150
1 unit → $30
8 units → $240

Q16b) left 9 units
1 unit → $30
9 units → $270

Q17)   22/7 x 56 x 5 ÷ 2.2 = 4480
4480 ÷ 7 = 640

2.5 units x 1 unit – 2.5 units²

640 ÷ 2.5 = 256
256 = 16 x 16

3.5U + 56
3.5 x16 = 56

(80 + 56) x 2 → 272cm

Q18.   B → $\frac{1296 - 720}{2}$ + 720 → 1080

W → $\frac{1296 - 720}{2}$ → 288

1008 ÷ 3 = 336
336 – 288 = 48

48 ÷ 4 = 12
288 ÷ 12 → 24