NANYANG PRIMARY SCHOOL

FIRST SEMESTRAL EXAMINATION 2015

PRIMARY 6

MATHEMATICS

PAPER 1

DURATION: 50 MINUTES

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)

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1 Find the sum of all the factors of 16.

(1) 17

(2) 20

(3) 31

(4) 35

2 Find the value of $15 \div 4$.

(1) 3.65

(2) 3.70

(3) 3.75

(4) 4.25

3 Arrange the following fractions from the greatest to the smallest.

$$\frac{7}{5}, \quad 1\frac{2}{3}, \quad \frac{7}{4}$$

(1) $1\frac{2}{3}, \quad \frac{7}{5}, \quad \frac{7}{4}$

(2) $\frac{7}{4}, \quad \frac{7}{5}, \quad 1\frac{2}{3}$

(3) $\frac{7}{5}, \quad 1\frac{2}{3}, \quad \frac{7}{4}$

(4) $\frac{7}{4}, \quad 1\frac{2}{3}, \quad \frac{7}{5}$

4 Jane had 6p stamps. After she had sold $\frac{2}{3}$ of her stamps, she gave 1 stamp to her brother. Her mother then gave her another 3p stamps. How many stamps did Jane have at the end?

(1) $2p - 1$

(2) $5p - 1$

(3) $6p - 1$

(4) $7p - 1$

5 Soo Hyun had 1800 beads. The number of beads that he had was 80% of the number of beads that Woo Bin had. How many beads did Woo Bin have?

(1) 720

(2) 1000

(3) 1440

(4) 2250

6 Jun Xi received a salary of $2000 in April. He received a salary of $2500 in May. What was the percentage increase in his salary?

(1) 20%

(2) 25%

(3) 80%

(4) 125%

7 The ratio of Vick's allowance to Nick's allowance was 7 : 4. Nick had $84. How much did the two boys have altogether?

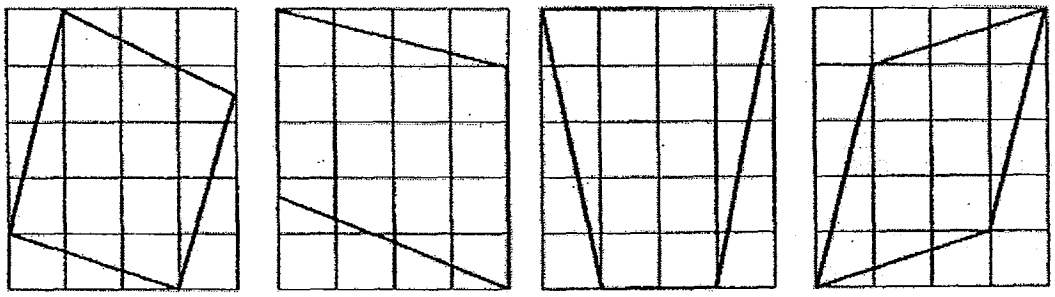
(1) $36

(2) $63

(3) $132

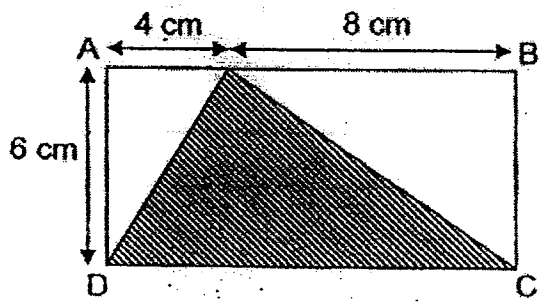
(4) $231

8 In the square grid below, which shape shows a parallelogram?



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

9 In the figure below, ABCD is a rectangle. Find the area of the shaded triangle.



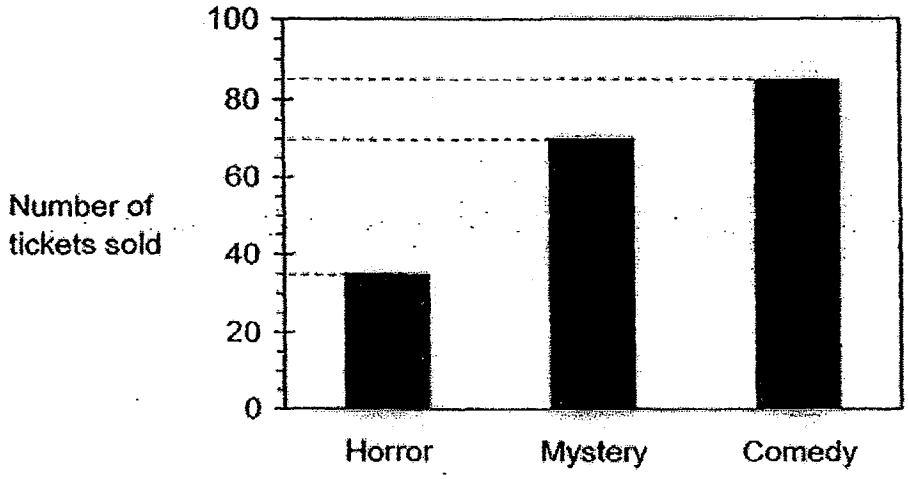
(1) 12 cm²

(2) 24 cm²

(3) 36 cm²

(4) 72 cm²

10 The bar graph below shows the number of movie tickets sold for each movie category in one day. How many movie tickets were sold altogether?



(1) 180

(2) 185

(3) 190

(4) 195

11 Find the value of $\frac{14}{5} \times \frac{5}{6}$.

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

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

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

(4) $2\frac{9}{11}$

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

8.101, 8.01, 8.11

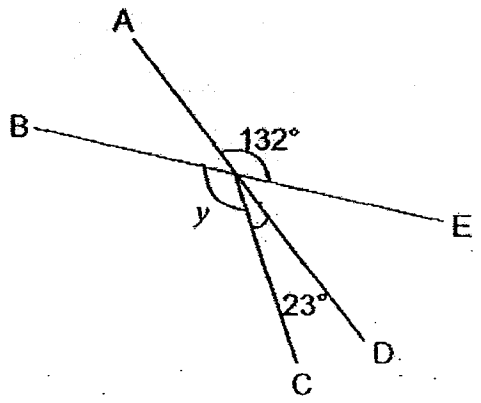
(1) 8.01, 8.101, 8.11

(2) 8.101, 8.11, 8.01

(3) 8.01, 8.11, 8.101

(4) 8.11, 8.01, 8.101

13 In the figure below, AD and BE are straight lines. Find $\angle y$.



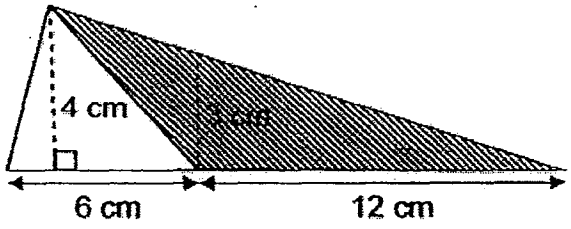
(1) 109°

(2) 119°

(3) 132°

(4) 157°

14 The figure below is made up of 2 triangles. Find the difference between the area of the shaded triangle and the area of the unshaded triangle in the figure below.



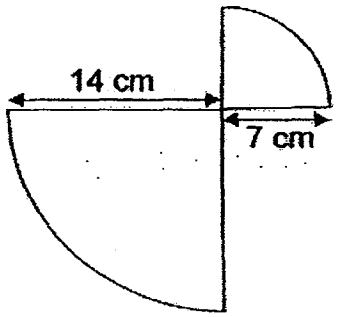
(1) 6 cm²

(2) 12 cm²

(3) 18 cm²

(4) 30 cm²

15 The figure below is made up of two quadrants of different sizes. What is the perimeter of the figure? (Take $\pi = \frac{22}{7}$)



(1) 33 cm

(2) 54 cm

(3) 75 cm

(4) 86 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)

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16 Simplify $12c - 5 - 4c \times 2$.

Ans: _____

---

17 Find the sum of 4294 and 716.

Ans: _____

---

18 Insert a pair of brackets, ( ), in the number statement below to make it a correct number statement.

$$16 + 8 \div 4 \times 2 - 7 = 10$$

---

19 Express 4.64 as a mixed number in its simplest form.

Ans: _____

---

20 Round off 2.196 to 2 decimal places.

Ans: _____

---

21 Hyun Bin bought a bag at $819 after a 10% discount. What was the usual price of the bag before discount?

Ans: $ _____

---

22 The ratio of the length of a rectangle to its breadth is 8 : 5. The perimeter of the rectangle is 130 cm. What is the length of the rectangle?

Ans: _____ cm

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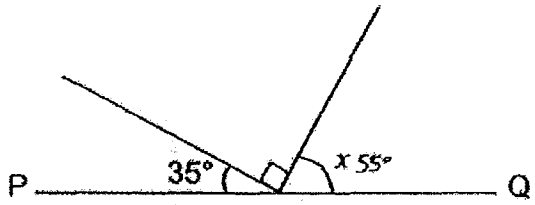
23 In the figure below, PQ is a straight line. Find $\angle x$.



Ans: _____ °

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24 How many months are there in $3\frac{3}{4}$ years?

Ans: _____

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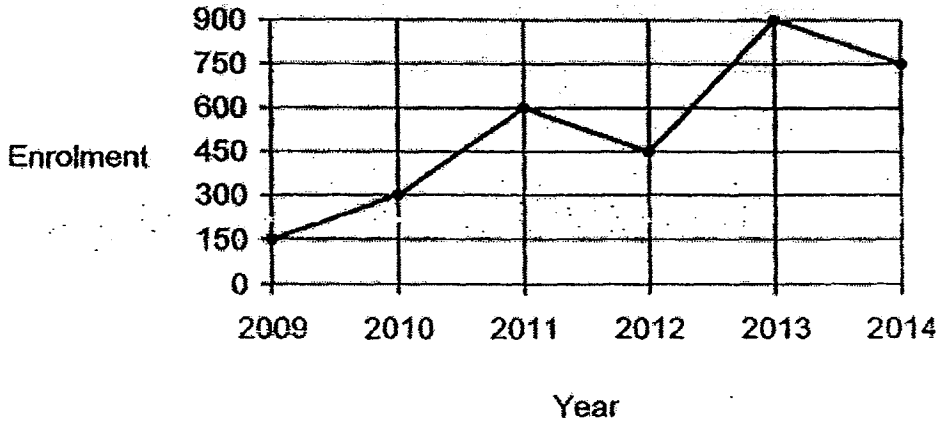
25 The line graph shows the total enrolment of pupils of an enrichment centre from 2009 to 2014. In which year was the enrolment of the centre 3 times its enrolment in 2009?



Ans: Year _____

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 Sanjeev packs 11 kg of flour into small packets. Each packet contains $\frac{2}{3}$ kg of flour. How many of such small packets of flour are there?

Ans: _____

---

27 The total mass of 2 identical packets of chocolates is 1.45 kg. What is the total mass of 10 such packets of chocolates?

Ans: _____ g

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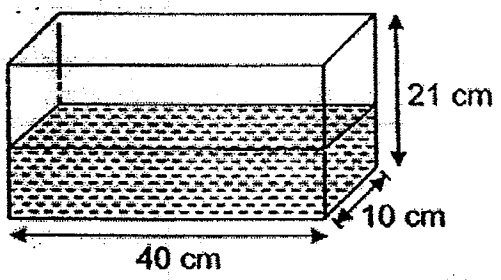
28 The tank was filled to the brim after 4*l* of water was poured in. What was the height of the water in the tank before the water was poured in?



Ans: _____ cm

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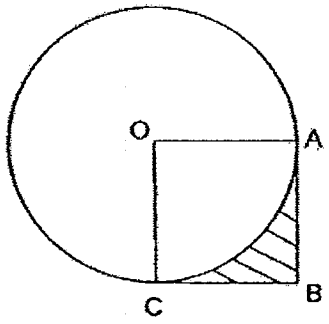
29 The figure below shows a circle and a square OABC. The area of the square is 144 cm². What is the area of the shaded part? (Leave your answer in terms of π.)



Ans: _____ cm²

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30 The total mass of 2 boys is 94 kg. The average mass of 3 girls is 42 kg. Find the average mass of the 5 children.

Ans: _____ kg

END OF PAPER

NANYANG PRIMARY SCHOOL

FIRST SEMESTRAL EXAMINATION 2015

PRIMARY 6

MATHEMATICS

PAPER 2

DURATION: 1 HOUR 40 MINUTES

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)

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1 Find the value of $\frac{3y}{4} + 2y - 6$ when $y = 5$.

Ans: _____

---

2 There were 60 members in the Drama Club. 45 of them were girls. What was the ratio of the number of boys to the number of girls? Leave your answer in its simplest form.

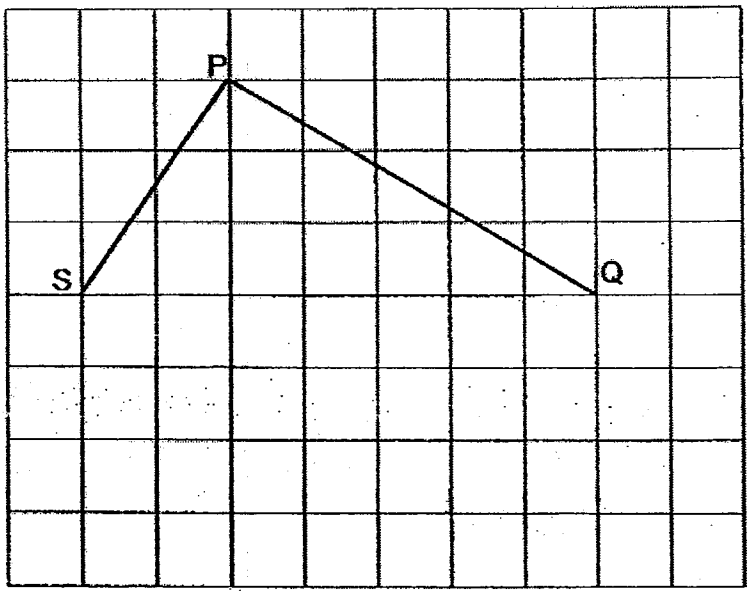
Ans: _____

---

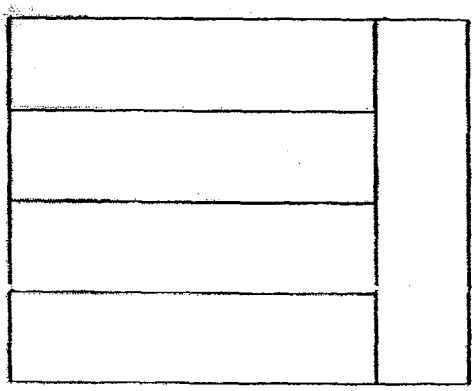
3 The ratio of En Xi's height to Jun Xi's height is 2 : 3. The ratio of Jun Xi's height to You Jie's height is 4 : 5. How many times is You Jie as tall as En Xi? Leave your answer as a mixed number in its simplest form.

Ans: _____

4 In the square grid below, SP and PQ are two sides of rectangle PQRS. Complete the rectangle by drawing the other two sides in the square grid below.



5 The figure below is made up of 5 identical rectangles. The perimeter of the figure is 360 cm. Find the length of each of the rectangles.



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 The cost of 4 pears and 3 apples is \$5.40. The cost of a pear and 2 apples is \$2.10. Find the difference between the price of an apple and the price of a pear.

Ans: _____ [3]

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7 The ratio of the number of boys to the number of girls in 6A was 3 : 2. The ratio of the number of boys to the number of girls in 6B was 3 : 4. The number of girls in both classes was the same. What was the ratio of the number of boys in 6A to the total number of boys in both classes? Give your answer in its simplest form.

Ans: _____ [3]

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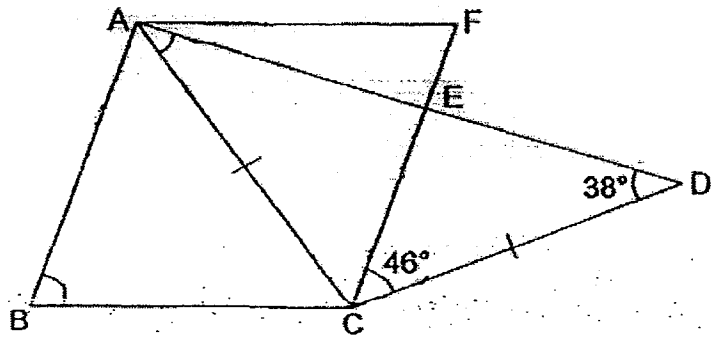
8 In the figure below, ABCF is a rhombus and ACD is an isosceles triangle. $\angle CDE = 38°$ and $\angle ECD = 46°$.



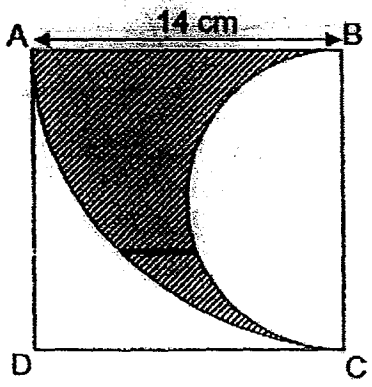
(a) Find $\angle ACD$.

(b) Find $\angle ABC$.

Ans: (a) _____ [1]

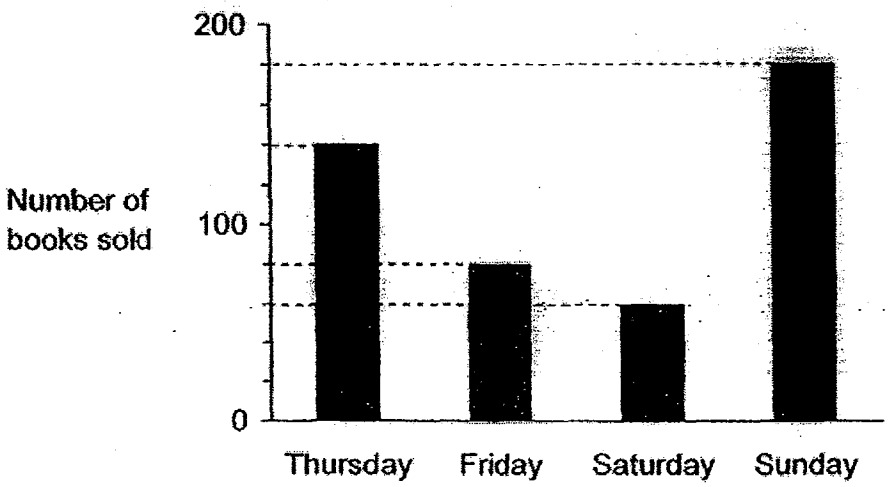
(b) _____ [2]

9 The figure below is made up of square ABCD, a quadrant and a semicircle. What fraction of the square is shaded? Give your answer in its simplest form. (Take $\pi = \frac{22}{7}$)



Ans: _____ [3]

10 The graph below shows the number of books sold in a store during a sale from Thursday to Sunday.



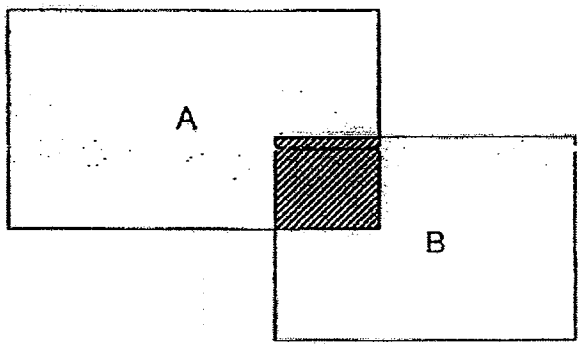
(a) How many more books were sold on Thursday than on Friday?

(b) What was the percentage increase in the number books sold on Sunday than Saturday?

Ans: (a) _____ [1]

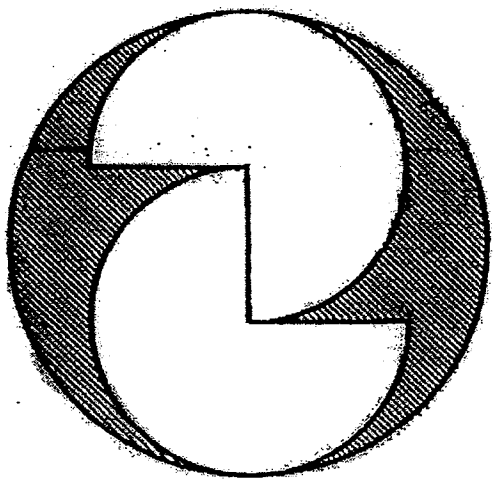
(b) _____ [2]

11 The figure below shows 2 overlapping rectangles, A and B. Area of rectangle A is $\frac{10}{9}$ the area of rectangle B. 20% of rectangle A is shaded. The total unshaded area of rectangles A and B is 450 cm². What is the area of the shaded part?



Ans: _____ [4]

12 The figure below shows a circle and two identical $\frac{3}{4}$ circles. The radius of each of the $\frac{3}{4}$ circles is 9 cm. Using the calculator value of π, find the perimeter of the shaded region. Correct your answer to 2 decimal places.



Ans: _____ [4]

13 Remi had the same number of blue beads, yellow beads and green beads at first. After 128 yellow beads, some blue beads and green beads were given away, there were 251 beads left. The number of yellow beads left was 78 more than the number of green beads left. There were thrice as many yellow beads as blue beads left. How many blue beads did Remi give away?

Ans: _____ [4]

14 A certain number of buses had been booked for a school outing for group of students. If each bus were to take 35 students, 15 students would not be able to get up the bus. If each bus were to take 40 students, there would be one empty bus left.

(a) How many buses were booked for the outing?

(b) How many students were going on the outing?

Ans: (a) _____ [3]

(b) _____ [1]

15 Shu Yan spent $\frac{3}{4}$ of her money to buy a purse. Tom spent the same amount of money as Shu Yan to buy a wallet and had $\frac{3}{5}$ of his money left. In the end, the amount of money Tom had left was $60.20 more than what Shu Yan had left. How much money did Shu Yan have at first?

Ans: _____ [4]

16 Naomi, Zec and Julian bought a present for their mother. Naomi paid $\frac{1}{5}$ of the amount paid by Zec and Julian. Zec paid $\frac{2}{7}$ of the total cost of the present. Julian paid $64 more than Naomi for the present.

(a) How much did Naomi pay for the present?

(b) What was the cost of the present?

Ans: (a) _____ [4]

(b) _____ [1]

17 Shini used some flour to bake some pies to sell. $\frac{4}{9}$ of the pies were chicken pies and the rest were apple pies. After selling $\frac{3}{4}$ of the chicken pies and 144 apple pies, she had $\frac{1}{6}$ of the pies left. Shini used $\frac{2}{5}$ kg of flour to bake each pie. How much flour did she use to bake all the pies at first? Leave your answer as a decimal in kg.

Ans: _____ [5]

18 At a musical, tickets were sold at \$20, \$30 and \$50 respectively. The number of \$20-tickets sold was $\frac{1}{5}$ of the total number of tickets sold. The ratio of the number of \$30-tickets sold to \$20-tickets sold was 3 : 2. The amount collected from the \$50-tickets was \$6300 more than the amount collected from the \$20-tickets. What was the total amount of money collected from the sale of the musical tickets?

Ans: _____ [5]

END OF PAPER

Answer Ke

EXAM PAPER 2015

SCHOOL : NANYANG

SUBJECT : P6 MATHEMATICS

TERM : SA1

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

16)4c – 5 17)5010 18)16+8 ÷ (4x2) – 7 = 10 19)$4\frac{16}{25}$

20)2.20 21)$910 22)40cm 23)55° 24)45

25)2012 26)16 27)7250g 28)11cm

29)$(144 - 36\ \Pi)cm_2$ ~~30)44kg~~

<u>Paper 2</u>

1)3y→3 x 5 = 15

2y→2 x 5 = 10

15/4 + 10 – 6 = 7¾

2)60 – 45 = 15 (Boys)

6)$5.40 – $2.10 = $3.30 (3p+1A)

B : G

15: 45

1 : 3

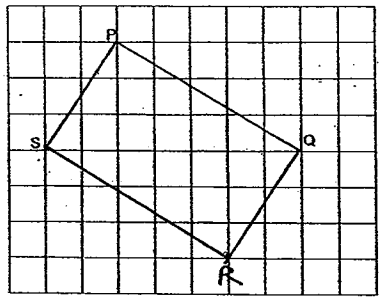
3)E : J J : Y

2 : 3 4 : 5

8 : 12 12 : 15

15 ÷ 8 = 1 7/8

4)



5)4u + 1u = 5u

4u + 5u + 4U + 5U = 18U

18U → 360

1u → 360 ÷ 18 = 20

4u → 20 x 4 = 80cm

$3.30 ÷ 3 = $1.10 (1p+1/3A)

$2.10 – $1.10 = $1 (1 2/3 A)

1 2/3 = 5/3

$1 ÷ 5 = $0.20 (1/3A)

$0.20 x 3 = $0.60 (1A)

$1.10 – $0.20 = $0.90 (1P)

$0.90 – $0.60 = $0.30

7)B : G B : G

3 : 2 3 : 4

6 : 4

6A : total

B : B

6 : 9

2 : 3

6u + 3u = 9u (total boys in 6A and 6B)

8)a) ∠ACD → 180° – 38° – 38° = 104°

b) ∠ABC → 180° – 58° – 58° = 64°

9)14 x 14 = 196

¼ x 22/7 x 14 x 14 = 154

14 ÷ 2 = 7

½ x 22/7 x 7 x 7 = 77

154 – 77 = 77

77/196 = 11/28

10)140 – 80 = 60

180 – 60 = 120

120/60 x 100% = 200%

a)60 b)200%

11)20% x 10u = 2u

19u – 2u – 2u = 15u

15u→450

1u→450 ÷ 15 = 30

2u→30 x 2 = 60cm_2

12)9 x 3 = 27

Π x 27 = 27Π

9 x 2 = 18

¾ x Π x 18 = 13.5Π

27Π + 13.5Π + 9 + 9 = 187.646.... ≈187.65cm

13)1u + 3u +(3u – 78)→251

7u – 78→251

7u→251 + 78 = 329

1u→329 ÷ 7 = 47

2u→47 x 2 = 94

94 + 128 = 222

14)35u + 15 = 40u – 40

40u – 35u→15 + 40

5u→55

1u→55 ÷ 5 = 11

11 x 35 = 385

385 + 15 = 400

a)11 b)400

15)1 – 3/5 = 2/5

2/5 of T→¾ of SY

6/15 of T→6/8 of SY

3/5 x 15u = 9u

1 – ¾ = ¼

¼ x 8u = 2u

9u – 2u = 7u

7u→$60.20

1u→$60.20 ÷ 7 = $8.60 8u→$8.60 x 8 = $68.80

16)Z : N+J : total N : Z : J

2 : 5 : 7 7 : 12 : 23

12 : 30 : 42

J→30u – 7u = 23u

23u – 7u = 16u

16u→$64

1u→$64÷16 = $4

7u→$4 x 7 = $28 (N)

42u→$4 x 42 = $168 (total)

a)$28 b)$168

17) ¾ x 4/9 = 1/3

1 – 1/3 – 1/6 = ½

½→144

2/2→144 x 2 = 288

288 x 2/5 = 115.2kg

18)10u – 5u = 5u ($50)

Units x $-->total

2u x $20→$40u

3u x $30→$90u

5u x $50→$250u

$250u – $40u = $210u

$210u→$6300

1u→$6300÷$210 = 30

2u→30 x 2 = 60

60 x $20 = $1200

3u→30 x 3 = 90

90 x $30 $2700

5u→5 x 30 = 150

150 x $50 = $7500

$1200+$2700+$7500 = $11400