

NANYANG PRIMARY SCHOOL  
FIRST CONTINUAL EXAMINATION  
2010

PRIMARY 6  
MATHEMATICS  
PAPER 1

DURATION: 50 MINUTES

Booklet A	/ 20
Booklet B	20

Paper 1 Total: 40
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Name: \_\_\_\_\_ (       )

Class: Primary 6 (       )

Date: 5 March 2010

Parent's Signature: \_\_\_\_\_

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

FOLLOW ALL INSTRUCTIONS CAREFULLY.

ANSWER ALL QUESTIONS.

YOU ARE **NOT** ALLOWED TO USE A CALCULATOR.

**PAPER 1 (BOOKLET A)**

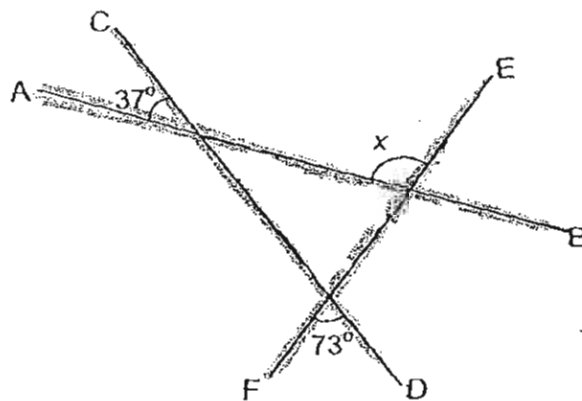
Questions 1 to 10 carry 1 mark each. Questions 11 to 15 carry 2 marks each. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the oval (1, 2, 3 or 4) on the Optical Answer Sheet.

(20 marks)

- 1 Simplify the following algebraic expression.

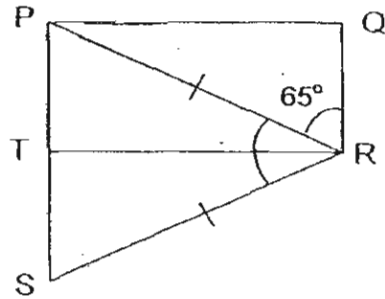
$$3a + 9 + 6 \times 2 - 8a$$

- (1)  $30 + 5a$   
(2)  $21 + 5a$   
(3)  $30 - 5a$   
(4)  $21 - 5a$
- 2 The figure below is not drawn to scale. Given that AB, CD and EF are straight lines, find  $\angle x$ .

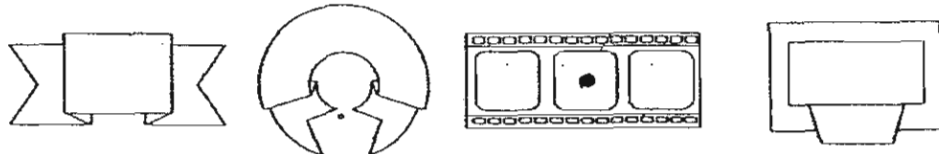


- (1)  $70^\circ$   
(2)  $107^\circ$   
(3)  $110^\circ$   
(4)  $143^\circ$

- 3 The figure below is not drawn to scale. Given that PQRT is a rectangle and PRS is an isosceles triangle. Find  $\angle PRS$ .

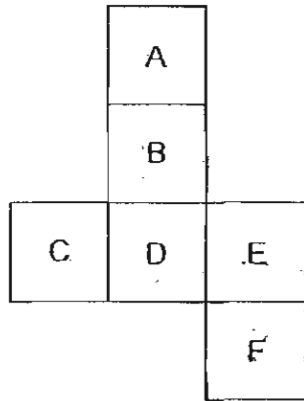


- (1)  $25^\circ$   
 (2)  $35^\circ$   
 (3)  $50^\circ$   
 (4)  $65^\circ$
- 4 How many of the figure(s) shown below has/have only 1 line of symmetry?



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

- 5 The figure below shows the net of a cube.



Which one of the above letters is opposite the letter B when the net is folded into a cube?

- (1) A
  - (2) C
  - (3) E
  - (4) F
- 6 Which one of the following is **not** equivalent to  $\frac{14}{4}$  ?

- (1)  $\frac{27}{8}$
- (2)  $28 \div 8$
- (3)  $3\frac{1}{2}$
- (4)  $\frac{7}{2}$

7 Simplify:

$$1\frac{2}{3} \times 3$$

(1)  $\frac{5}{9}$

(2) 2

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

(4) 5

8 Norah ate  $\frac{1}{7}$  of a pie and gave  $\frac{2}{3}$  of the remainder to each of her 5 friends equally. What fraction of the pie did each of her friends receive?

(1)  $\frac{6}{35}$

(2)  $\frac{4}{35}$

(3)  $\frac{2}{21}$

(4)  $\frac{2}{15}$

9 Mrs Lim had \$60. She bought 50 tarts at \$0.40 each. How much money had she left?

(1) \$20

(2) \$24

(3) \$40

(4) \$58

10 In a class of 40 pupils, 28 of the pupils go to school by bus and the remaining pupils go to school by car. If 10 boys go to school by bus and 6 boys go by car, what is the ratio of the number of girls who go to school by bus to the number of girls who go to school by car?

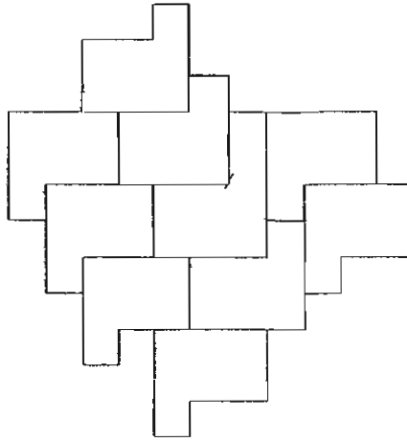
(1) 2 : 3

(2) 3 : 1

(3) 5 : 3

(4) 7 : 3

- 11 Look at the following tessellation.



How many of the unit shape(s) drawn has/have been tessellated wrongly?

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- 12 Peter had \$70. Gabriel had \$150 more than Peter. Tom had  $1\frac{2}{5}$  times as much as Gabriel. How much did Tom have?

- (1) \$98
- (2) \$210
- (3) \$308
- (4) \$518

13 May has less than 350 stamps. These stamps can be put in equal packs of 10 stamps as well as equal packs of 15 stamps. What is the maximum possible number of stamps in May's album?

(1) 150

(2) 300

(3) 330

(4) 340

14 100 papayas have a mass of 72 kg. A mango has a mass of 450 g. Find the total mass of 10 papayas and 10 mangoes.

(1) 0.117 kg

(2) 5.22 kg

(3) 11.7 kg

(4) 11700 kg

15 Given that  $12 : 28 = \boxed{?} : 21$ , what is the number in the box?

(1) 5

(2) 7

(3) 3

(4) 9

Name: \_\_\_\_\_ ( ) Class: Pr 6 ( )

P6 CA1 2010

**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.

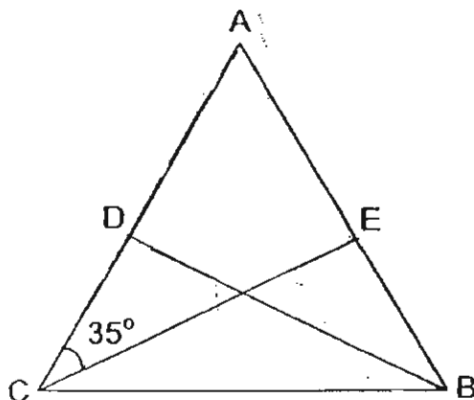
(10 marks)

- 16 Given that  $y = 7$ , what is the value of the following algebraic expression?

$$5y + 8 - 4y \div 2$$

Ans: \_\_\_\_\_

- 17 In the figure below which is not drawn to scale, ABC is an equilateral triangle and  $CF = BF$ . Given that  $\angle ACE = 35^\circ$ , find  $\angle DFE$  as shown in the figure below.



Ans: \_\_\_\_\_<sup>o</sup>

- 18 Arrange these fractions in descending order.

$$\frac{7}{8}, \frac{3}{4}, \frac{5}{6}$$

Ans: \_\_\_\_\_

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- 19 Mrs Lim had  $\frac{3}{5}$  kg of oil. She used  $\frac{3}{8}$  of it to fry chicken wings. What was the amount of oil left? (Leave your answer as a fraction in its simplest term.)

Ans: \_\_\_\_\_ kg

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- 20 There are 48 pages in a book. If Amy reads  $\frac{2}{3}$  of a page of the book per day, how many days will she take to complete reading the book?

Ans: \_\_\_\_\_

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21 Find the value of  $16 + 40 \div 4 \times 2 - 8$ .

Ans: \_\_\_\_\_

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22 What is the missing number in the box?

$$8.765 = 8 + 0.7 + 0.05 + \boxed{?}$$

Ans: \_\_\_\_\_

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23 Pens are only sold in packets of 6. Each packet is sold at \$3. Alice has \$31.80. How many pens can she buy at most?

Ans: \_\_\_\_\_

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- 24  $\frac{1}{8}$  of a jug of lemonade was syrup,  $\frac{1}{4}$  of it was ice and the remaining was water. What was the ratio of the amount of water to the amount of syrup used to make the lemonade?

Ans: \_\_\_\_\_

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- 25 The number of adults to the number of children seated in a train carriage was in the ratio 5 : 2. There were thrice as many women as men. There were 16 children in the train carriage. How many men were there in the train carriage?

Ans: \_\_\_\_\_

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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 Find the values of Y and Z.

		1	Y	6
x			3	Z
		8	8	2
+	3	7	8	0
	4	6	6	2

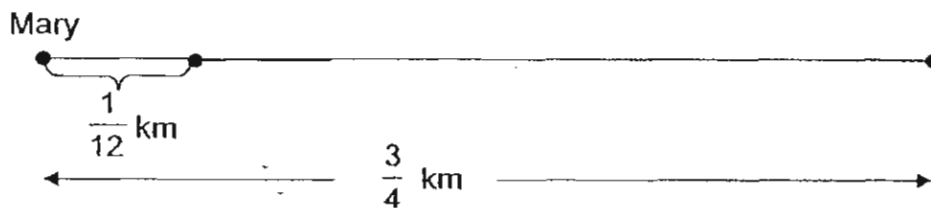
Ans: Y = \_\_\_\_\_

Z = \_\_\_\_\_

27 Russell paid \$6.60 for 6 pencils and some rulers. Each pencil cost  $x$  cents and each ruler cost  $(x - 50)$  cents. If  $x = 90$ , how many rulers did he buy?

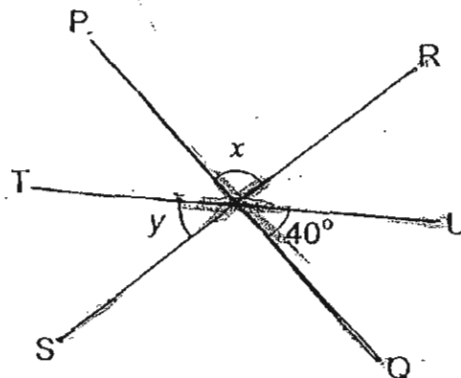
Ans: \_\_\_\_\_

- 28 A group of children were standing in a line at  $\frac{1}{12}$  km apart on a straight road which measured  $\frac{3}{4}$  km. If Mary was the first person in line, how many children were there altogether?



Ans: \_\_\_\_\_

- 29 In the figure below which is not drawn to scale, PQ, RS and TU are straight lines.  $\frac{1}{2}$  of  $\angle x$  is  $\frac{2}{3}$  of  $\angle y$ . Find  $\angle y$ .

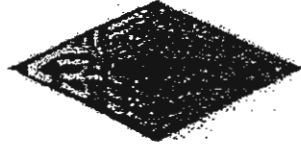


Ans: \_\_\_\_\_<sup>o</sup>

- 30 Su Jun, Emery and Mark shared 116 coins in a certain ratio. When each of them received 4 more coins, the ratio of the number of Su Jun's coins to Emery's coins to Mark's coins was 5 : 7 : 4. How many coins did Su Jun have now?

Ans: \_\_\_\_\_

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NANYANG PRIMARY SCHOOL  
FIRST CONTINUAL EXAMINATION  
2010

PRIMARY 6  
MATHEMATICS  
PAPER 2

DURATION: 1 HOUR 40 MINUTES

<b>Paper 2 Total</b>	<b>/ 60</b>
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<b>GRAND TOTAL</b>	<b>/ 100</b>
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Name: \_\_\_\_\_ (       )

Class: Primary 6 (       )

Date: 5 March 2010

Parent's Signature: \_\_\_\_\_

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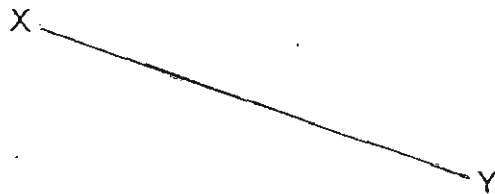
YOU ARE ALLOWED TO USE A CALCULATOR.

PAPER 2

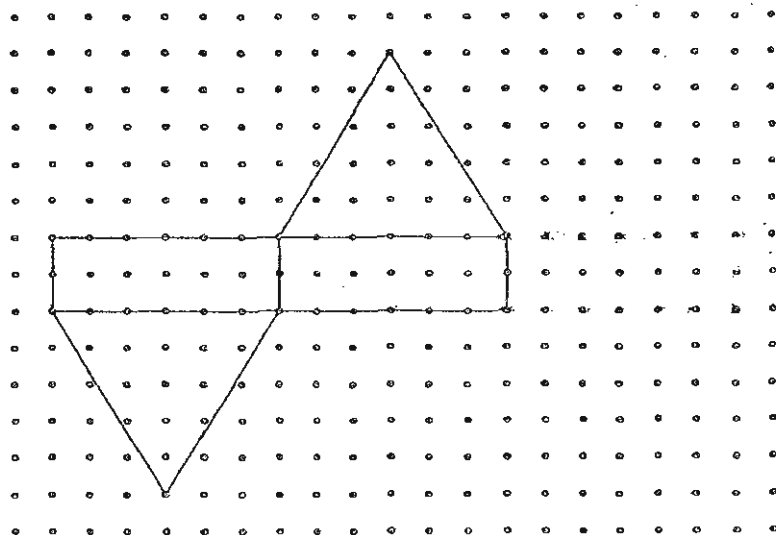
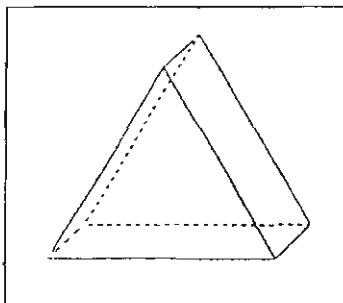
Questions 1 to 5 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.

(10 marks)

- 1 In the figure below,  $XY$  is a straight line. Draw an isosceles triangle  $XYZ$  such that  $\angle XYZ$  is  $65^\circ$  and  $XY = YZ$ .



- 2 In the diagram shown on the square grid below, draw in the missing part to complete the net of the solid shown in the box.



- 3 Xiao Ling had 40 m of cloth. She used  $\frac{1}{7}$  of it to make shirts and some of the remaining cloth to make dresses. If she had  $4\frac{5}{9}$  m left, how much cloth did she use to make dresses? (Leave your answer as a fraction in its simplest form.)

Ans: \_\_\_\_\_ m

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- 4 15.26 l of milk was shared equally among some children. If each child received 350 ml of milk and there was 0.56 l of milk left over, how many children were there?

Ans: \_\_\_\_\_

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- 5 After giving away 30 lollipops and 18 packets of jellybeans, Mariam had 14 of each type of sweets left. What was the initial ratio of the number of lollipops to the number of packets of jellybeans?

Ans: \_\_\_\_\_

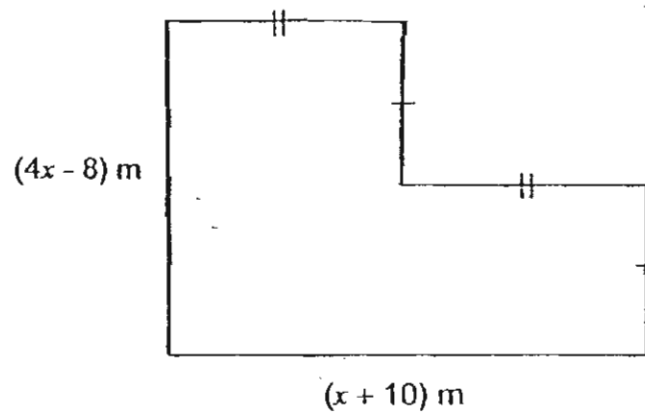
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For questions 6 to 18, show your working clearly in the space provided for each question and write your answers in the spaces provided.

The number of marks available is shown in brackets [ ] at the end of each question or part-question.

(50 marks)

- 6 The figure below shows the outline of a garden.



- (a) Express the perimeter of the garden in terms of  $x$ .
- (b) If  $x = 5$ , what would be the cost of putting fences around the garden when the cost of putting a fence is \$14 per metre?

Ans: (a) \_\_\_\_\_ [1]

(b) \_\_\_\_\_ [2]

- 7 Henry, Kimmy and Eddie had \$1095 altogether. After Henry spent  $\frac{2}{5}$  of his money and Kimmy spent \$40, Henry and Kimmy had the same amount of money left. Eddie spent twice the amount of what Henry had spent and had \$80 more than the amount that Henry was left with. How much money did Eddie have at first?

Ans: \_\_\_\_\_ [3]

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- 8 Kelvin and Christine had a total of 540 story books. After Kelvin gave Christine 23 books, Kelvin had 5 times as many books as Christine.
- (a) How many books did Christine have at first?
- (b) How many more books did Kelvin have than Christine at first?

Ans: (a) \_\_\_\_\_ [1]

(b) \_\_\_\_\_ [2]

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- 9 Sam started reading a book on Sunday. He read 9 pages on Sunday and continued reading the book for the whole week till Saturday. He increased the number of pages read by 3 pages everyday. He continued the reading pattern until he finished reading the book. How many pages were there in the book?

Day	No. of Pages Read
Sunday	9
Monday	9 + 3
:	:
:	:

Ans: \_\_\_\_\_ [3]

- 10 A florist had a total of 272 roses and lilies in the ratio 12 : 5. After selling away twice as many roses as lilies, the ratio of the number of roses to the number of lilies was then 5 : 2. How many roses did she sell?

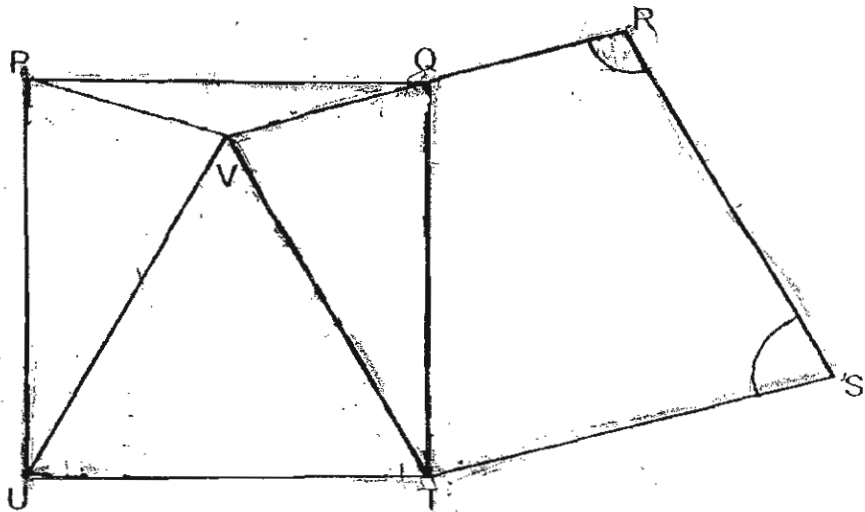
Ans: \_\_\_\_\_ [3]

11 In the figure below,  $PQTU$  is a square,  $TUV$  is an equilateral triangle and  $RSTV$  is a rhombus.

Find

(a)  $\angle QRS$

(b)  $\angle PVQ$



Ans: (a) \_\_\_\_\_ [2]

(b) \_\_\_\_\_ [2]

12 James spent  $\frac{3}{8}$  of his salary on food and saved  $\frac{2}{5}$  of the remainder. Then he used the rest of his salary to buy Christmas presents for his friends.

(a) If each present cost  $\frac{1}{16}$  of his salary, how many presents did he buy?

(b) If each present cost \$58, how much did James save?

Ans: (a) \_\_\_\_\_ [2]

(b) \_\_\_\_\_ [2]

- 13 There is a total of 195 fifty-cent, ten-cent and five-cent coins in a tin. There are 13 more ten-cent coins than fifty-cent coins. The number of five-cent coins is twice the total number of fifty-cent and ten-cent coins. What was the total amount of all these coins?

Ans: \_\_\_\_\_ [4]

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- 14 Bobby earns \$0.40 for every magazine he sells. A bonus of \$3 is given to him for every 80 magazines he sells. How many magazines must Bobby sell to earn \$881?

Ans: \_\_\_\_\_ [4]

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- 15 The total length of 12 ropes and 3 ribbons is 0.252 m shorter than the total length of 3 ropes and 12 ribbons.
- (a) What is the difference in length between one piece of rope and one piece of ribbon? (Leave your answer in cm.)
- (b) If the length of each piece of rope is 0.53 m, what is the length of each piece of ribbon? (Leave your answer in cm.)

Ans: (a) \_\_\_\_\_ [2]

(b) \_\_\_\_\_ [2]

- 16 Mr. Lee had 36 more guppies than goldfish. He sold  $\frac{1}{4}$  of the guppies and  $\frac{1}{5}$  of the goldfish. He found that he had sold 28 more guppies than goldfish. The guppies were sold at \$0.55<sup>each</sup> and the goldfish at \$0.85<sup>each</sup>. What was the total amount he received?

Ans: \_\_\_\_\_ [5]

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- 17 Julian had 300 more cards than Faizal. Julian gave  $\frac{3}{5}$  of his cards to Faizal. Faizal then gave  $\frac{1}{4}$  of the total number of what he had then to Julian. In the end, Faizal had 300 more cards than Julian. How many cards did Julian have at first?

Ans: (a) \_\_\_\_\_  $\frac{5}{4}$

- 18 Tanks X and Y are each filled with some water. If water from Tank Y is poured into Tank X until the water in Tank X reaches the brim, there will be 8 litres of water left in Tank Y. If water from Tank X is poured into Tank Y until the water in Tank Y reaches the brim, there will be 26 litres of water left in Tank X. The ratio of the volume of Tank X to the volume of Tank Y is 5 : 3. How many more litres of water are needed to fill both tanks to their brim?

Ans: \_\_\_\_\_ [5]

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END OF PAPER

Setters: Mrs Cassandra Ng  
Mrs Rachel Tan

# ANSWER SHEET

## EXAM PAPER 2010

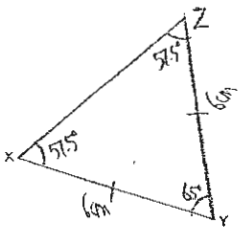
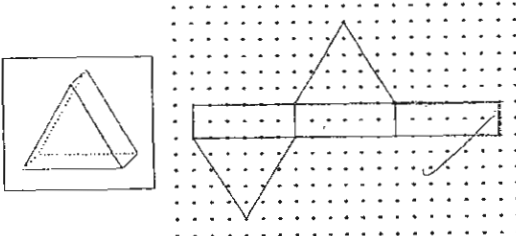
SCHOOL : NANYANG PRIMARY  
SUBJECT : PRIMARY 6 MATHEMATICS

TERM : CA1

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

- 16)29                      17)130°                      18)7/8, 5/6, 3/4                      19)3/8kg                      20)72 days
- 21)28                      22)0.015                      23)60 pens                      24)5:1                      25)10 men
- 26)Y: 2    Z: 7    27)3 rulers    28)10 children    29)60°                      30)40 coins

### Paper 2

<p>1)</p> 	<p>2)</p> 
<p>3) <math>40m \times \frac{1}{7} = \frac{55}{7}m</math>  <math>40m - \frac{55}{7} = \frac{342}{7}m</math>  <math>\frac{342}{7}m = \frac{3418}{63}m</math>  <math>\frac{45}{9}m = \frac{435}{63}m</math>  <math>\frac{3418}{63}m - \frac{435}{63}m = \frac{2946}{63}m</math></p>	<p>4) <math>15.26L - 0.56L = 14.7L</math>  <math>14.7L \div 350ml = 42 \text{ children}</math></p>
<p>5) L : P  14 : 14  30 : 18  44 : 32  11 : 8</p>	<p>6)a) <math>(4x - 8)m \times 2 = (8x - 16)m</math>  <math>(x + 10)m \times 2 = (2x + 20)m</math>  <math>(2x + 20)m + (8x - 16)m</math>  <math>= (10x + 4)m</math>  b) <math>10 \times 5 = 50</math>  <math>50 + 4 = 54</math>  <math>54 \times \\$14 = \\$756</math></p>

<p>7) <math>\\$1095 - \\$40 = \\$1055</math>  <math>\\$1055 - \\$80 = \\$975</math>  <math>\\$975 \div 15 = \\$65</math>  <math>\\$65 \times 7 = \\$455</math>  <math>\\$455 + \\$80 = \\$535</math></p>	<p>8)a) <math>540 - (6 \times 23) = 402</math>  <math>402 \div 6 = 67</math>  b) <math>(23 \times 6) + (67 \times 5) = 473</math>  <math>473 - 67 = 406</math></p>
<p>9) <math>(7 \times 9) + (21 \times 3) = 126</math> pages</p>	<p>10) 32 roses</p>
<p>11)a) <math>105^\circ</math>      b) <math>105^\circ</math></p>	<p>12)a) <math>1 - 3/8 = 5/8</math>  <math>5/8 \times 2/5 = 1/4</math>  <math>5/8 - 2/8 = 3/8</math>  <math>3/8 \div 1/16 = 3/8 \times 16/1 = 6</math>  b) <math>6 \times \\$58 = \\$348</math>  <math>\\$348 \div 3 = \\$116</math>  <math>\\$116 \times 2 = \\$232</math></p>
<p>13) <math>195 - 13 - 26 = 156</math>  <math>156 \div 6 = 26</math>  10c <math>\rightarrow (26 + 13) \times 0.10 = \\$3.90</math>  50c <math>\rightarrow 26 \times 0.50 = \\$13</math>  5c <math>\rightarrow (5 \times 26) \times 0.05 = \\$6.50</math>  <b>Total Amt: <math>\\$6.50 + \\$3.90 + \\$13 = \\$23.40</math></b></p>	<p>14) <math>80 \times \\$0.40 = \\$32</math>  <math>\\$32 + \\$3 = \\$35</math> (80mag + bonus)  <math>\\$881 \div \\$35 = 25R15</math>  <math>25 \times 80 + 15 = 2015</math> magazines</p>
<p>15)a) <math>12 - 3 = 9</math>  9 difference <math>\rightarrow 0.252\text{cm}</math>  1 difference <math>\rightarrow 0.252\text{cm} \div 9 = 0.028\text{cm}</math>  b) <math>0.53\text{m} + 0.028\text{m} = 0.558\text{cm}</math></p>	<p>16) <math>28 - 12 = 16</math>  <math>16 \times 20 = 320</math>  <math>320 + 60 = 380</math>  <math>380 + 36 = 416</math>  gf: <math>380 \times 0.2 = 76</math>  gp: <math>416 \times 0.25 = 104</math>  <math>104 \times \\$0.55 = \\$57.20</math>  <math>76 \times \\$0.85 = \\$64.60</math>  <math>\\$64.60 + \\$57.20 = \\$121.80</math></p>
<p>17) <math>2u + 135 + 20 - 45 = 300</math>  2 units <math>\rightarrow 300 - 135 + 165 = 330</math>  1u <math>\rightarrow 330 \div 2 = 165</math>  <b>Total <math>\rightarrow (165 \times 5) + 300 = 1125</math></b></p>	<p>18) 19L</p>