NANYANG PRIMARY SCHOOL

PRELIMINARY EXAMINATION 2010

PRIMARY 6

MATHEMATICS

PAPER 1

DURATION: 50 MINUTES

Booklet A	/ 20
Booklet B	/ 20

Paper 1 Total: / 40

Name:_____ (

Class: Primary 6 ( )

Date: 25 August 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 Which of the following is nine hundred and eighteen thousand and twelve in figures?

(1) 18 912

(2) 91 812

(3) 918 012

(4) 918 120

2 50 000 ÷ 200 = _____ x 5

(1) 5

(2) 50

(3) 500

(4) 5000

3 Find the value of $28 + (19 - 17) \times 3 - 12 + 9$.

(1) 87

(2) 69

(3) 31

(4) 13

4 7 hundreds, 8 tenths and 2 thousandths is _____.

(1) 780.002

(2) 700.802

(3) 700.280

(4) 700.082

5 The mass of 4 identical lollipops is 45.08 g. Find the mass of 2 such lollipops.

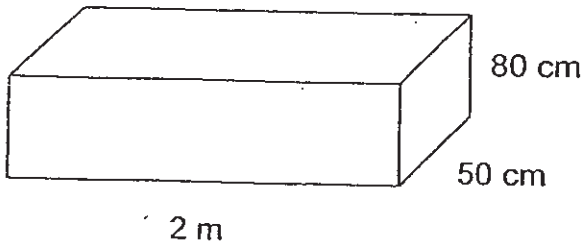
(1) 11.27 g

(2) 22.54 g

(3) 22.90 g

(4) 90.16 g

6 Find the volume of the cuboid shown below.



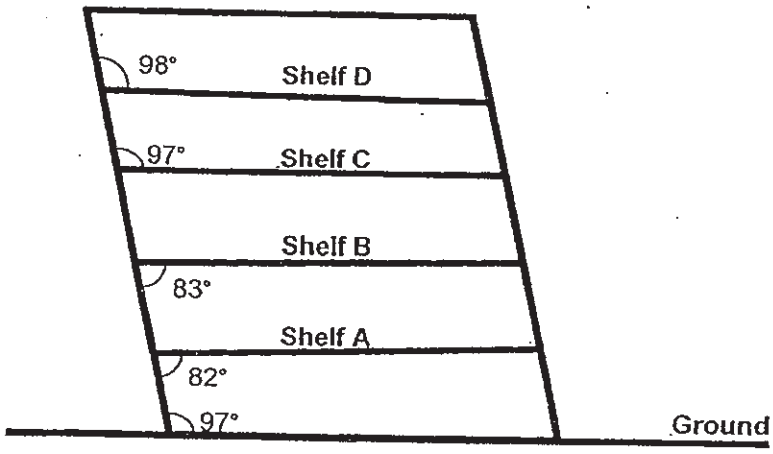
(1) 0.008 m^3

(2) 0.8 m^3

(3) 80 m^3

(4) 8 000 m^3

7 Derrick constructed a set of shelves as shown below. Which pair of shelves are parallel to the ground?



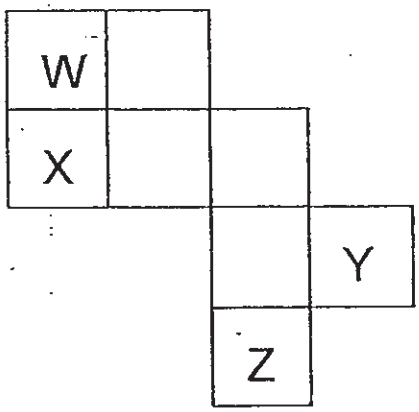
(1) A and C

(2) A and D

(3) B and C

(4) B and D

8 Identify the two squares that can be crossed out from the following figure so that the remaining figure will become the net of a cube.



(1) Z and Y

(2) Y and X

(3) Y and W

(4) X and W

9 Shah and Lionel have a sum of money. If Shah spends $\frac{3}{5}$ of his money and Lionel spends $\frac{3}{7}$ of his, the two boys will have the same amount of money left. What fraction of the total sum of money is Lionel's money?

(1) $\frac{7}{17}$

(2) $\frac{10}{17}$

(3) $\frac{5}{12}$

(4) $\frac{7}{12}$

10 Marie's score for Mathematics has improved from 50 marks to 75 marks. What is the percentage increase?

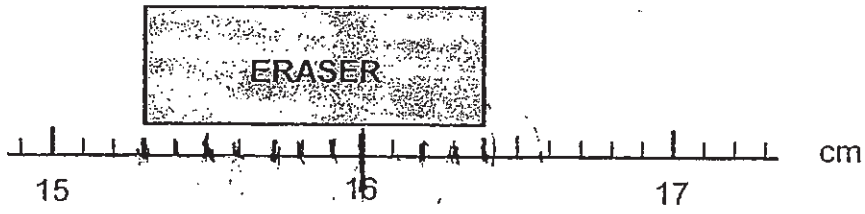
(1) $33\frac{1}{3}\%$

(2) 50%

(3) $66\frac{2}{3}\%$

(4) 150%

11 What is the total length of 5 erasers identical to the one shown in the figure below?



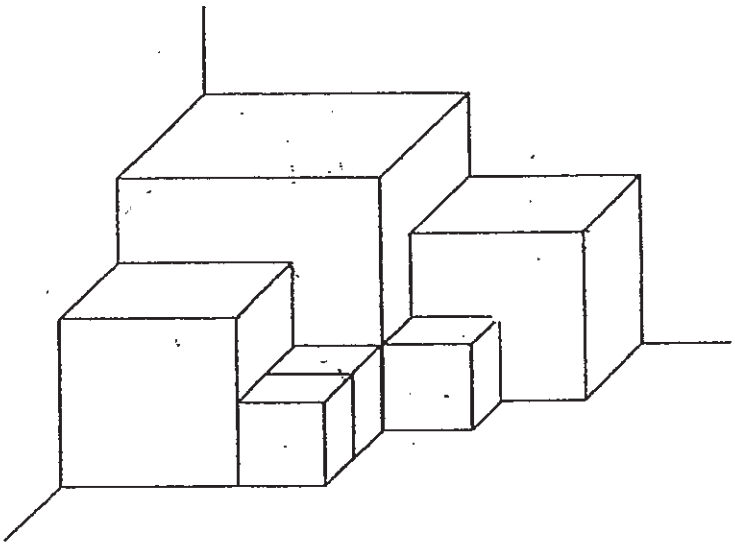
(1) 1.1 cm

(2) 5.5 cm

(3) 76.5 cm

(4) 82 cm

12 The figure below is made up of 6 cubes of 3 different sizes. What is the ratio of the total volume of the small cubes to the total volume of the medium cubes to the volume of the large cube?



(1) 3 : 16 : 27

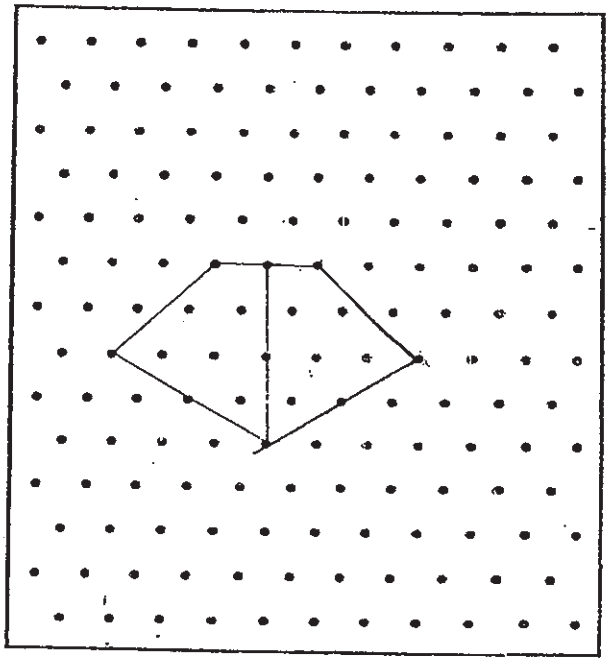
(2) 3 : 8 : 9

(3) 3 : 2 : 1

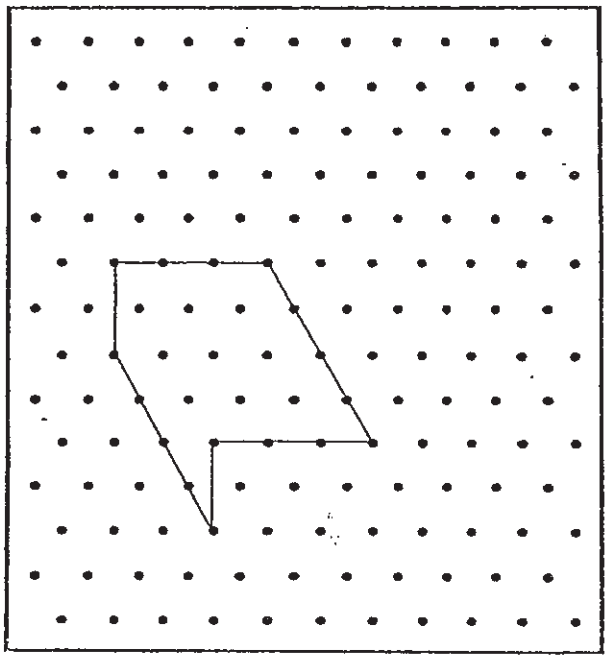
(4) 1 : 8 : 27

13 Which of the following unit shapes **cannot** be tessellated?

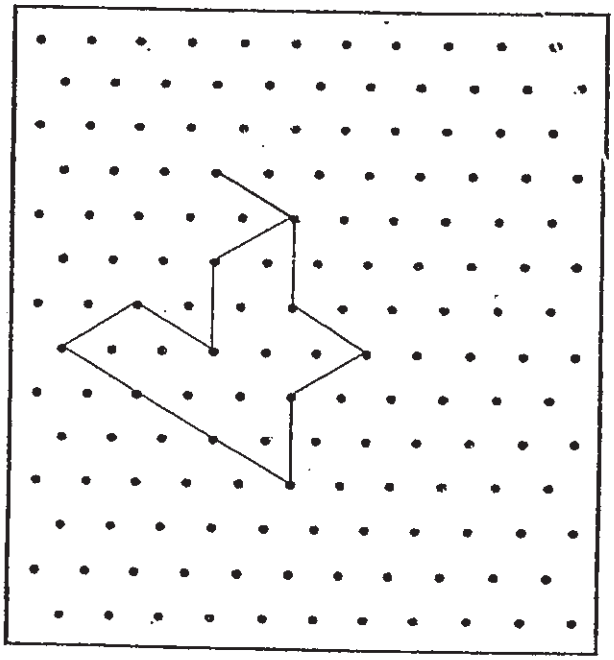
(1)



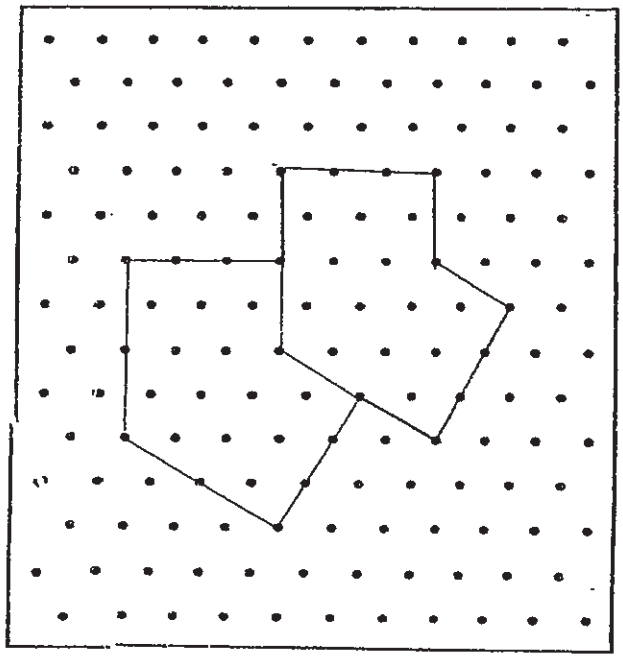
(2)



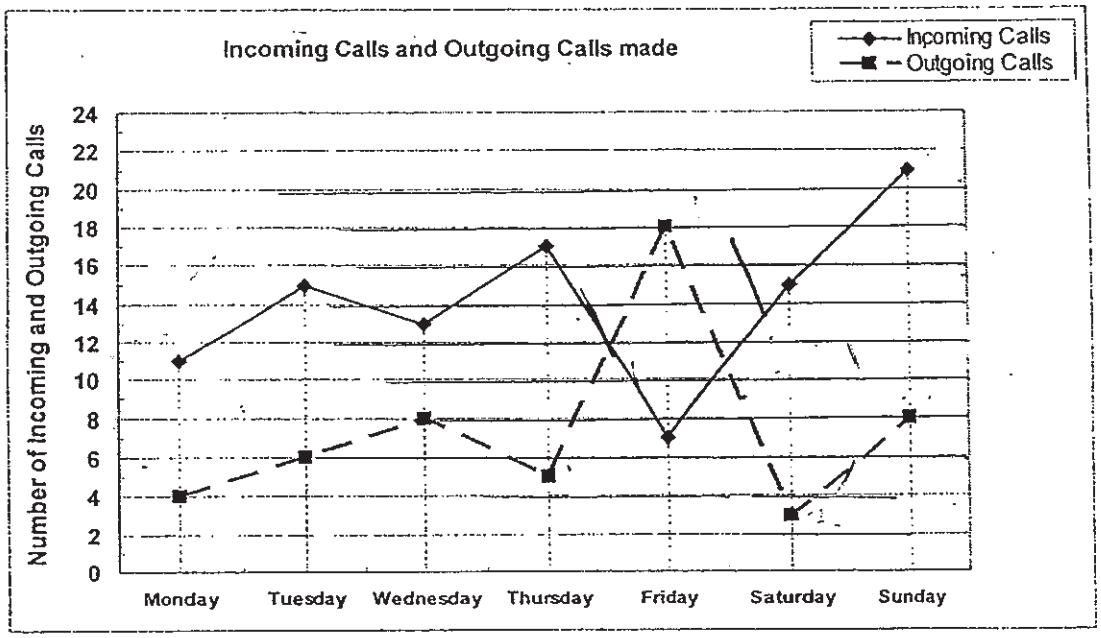
(3)



(4)



14 The line graph shows the number of Incoming calls and Outgoing calls made by Jiemin through her mobile phone over a week.



On which day was there the greatest difference between the number of Incoming calls and Outgoing calls?

(1) Sunday

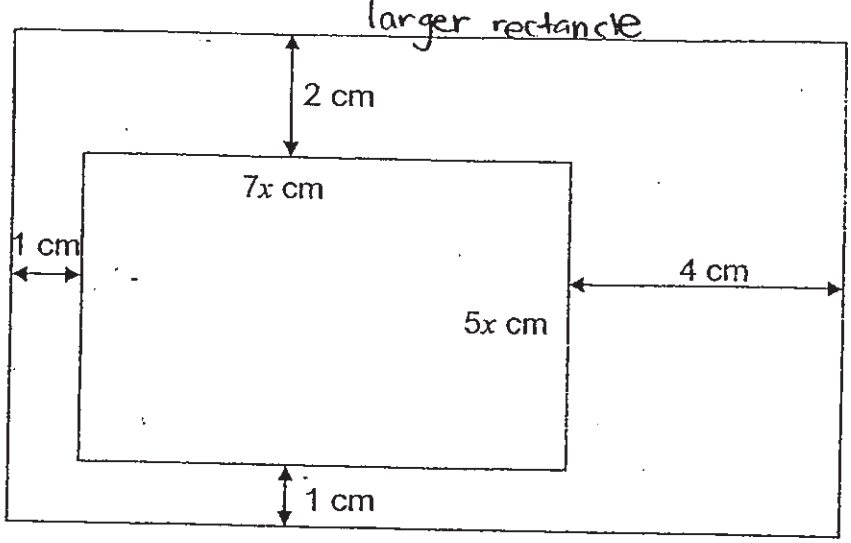
(2) Saturday

(3) Friday

(4) Thursday

the figure below shows two rectangles.

15 Express the perimeter of the ~~following figure~~ larger rectangle in terms of x.



(1) $(12x + 8)$ cm

(2) $(12x + 16)$ cm

(3) $(24x + 8)$ cm

(4) $(24x + 16)$ cm

Name: _____( ) Class: Pr 6 ( )

P6 PRELIMINARY EXAMINATION 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)

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16 Mr Zhang bought 5908 magnets. He packed all the magnets into boxes of 7. How many boxes were there?

Ans: _____

---

17 What is the missing number in the box?
Express your answer as a mixed number in its simplest form.

$$1\frac{3}{5} + 2\frac{1}{10} - \boxed{?} = \frac{1}{2}$$

Ans: _____

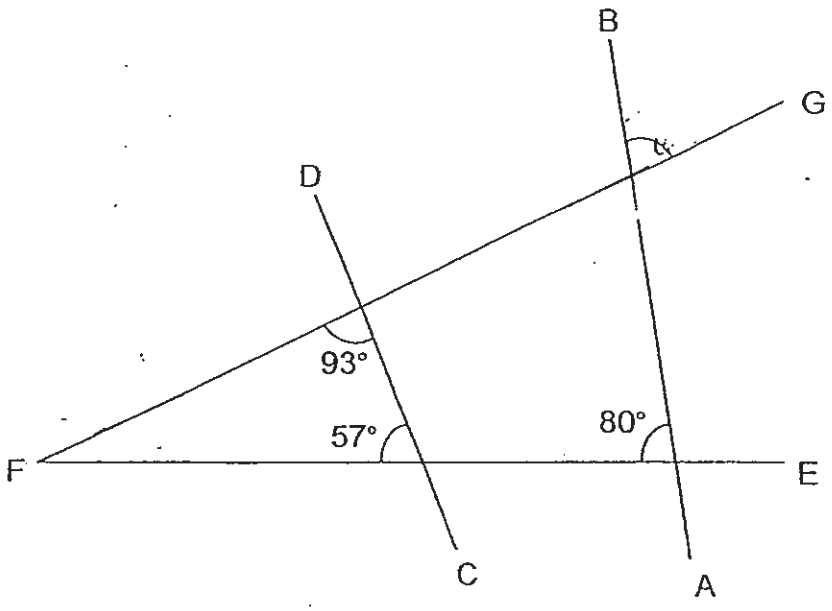
---

18 Find the product of $2\frac{7}{9}$ and 33. (Give your answer in its simplest form.)

Ans: _____

---

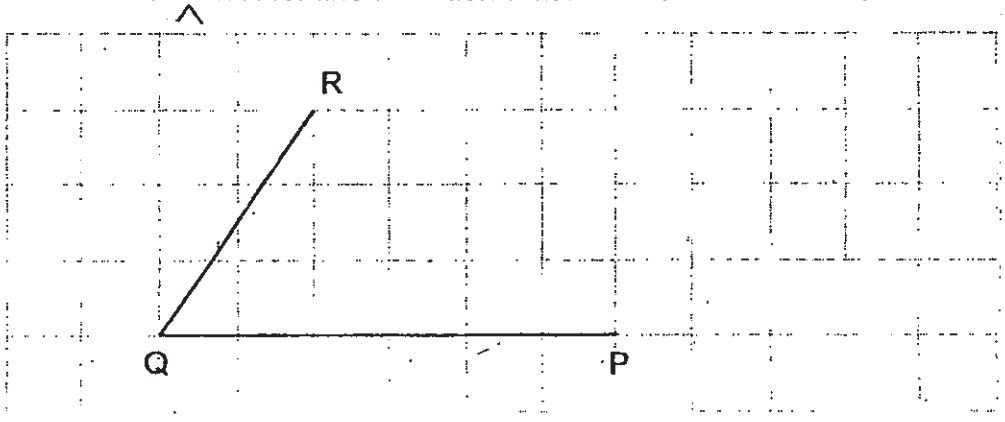
19 AB, CD, EF and FG are straight lines. Find $\angle p$.



Ans: _____ °

---

20 The figure below shows two lines, PQ and QR, on a square grid.
Draw another line PS such that PS // QR and PS = QR. ~~Label it.~~



21 The cost of 3 mangoes is the same as the cost of 5 grapefruits. The cost of 3 mangoes is also the same as the cost of 10 pears. Find the ratio of the cost of a mango to the cost of a grapefruit to the cost of a pear.

Ans: _____

---

22 Jean cycled at a speed of 20 km/h for 15 minutes from her home to her office. What is the distance between Jean's home and office?

Ans: _____ km

---

23 The masses of an apple and an orange when corrected to the nearest gram are 40 g and 63 g respectively. Calculate the least possible mass of an apple and 2 such oranges.

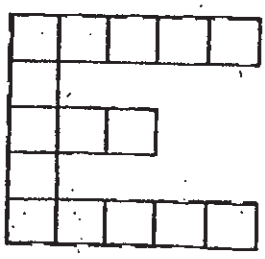
Ans: _____ g

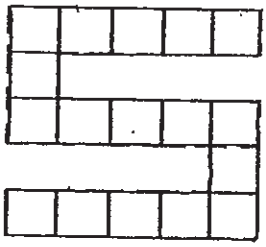
24 Mr Tan started work on a sculpture at 1.45 a.m. and completed it at 9.30 p.m. on the same day. How much time did he take to complete the sculpture?

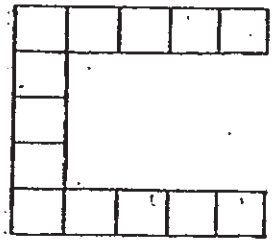
Ans: _____ h

---

25 The figures E, S and C given below are made from squares of equal size. Arrange them in an ascending order in accordance to their perimeters.







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 Tap A takes 6 minutes to fill Tank C. Tap B takes 4 minutes to fill Tank C. If Tap A and B are turned on at the same time, how long would they take to fill $\frac{3}{4}$ of Tank C?

Ans: _____ min

---

27 Ali scores a total of 168 marks for his Mathematics test and English test. He scored x more marks for his English test than his Mathematics test.

(a) How many marks did he score for his English test? (Give your answer in terms of x.)

(b) How many marks did he score for his English test if $x = 8$?

Ans: (a)_____

(b)_____

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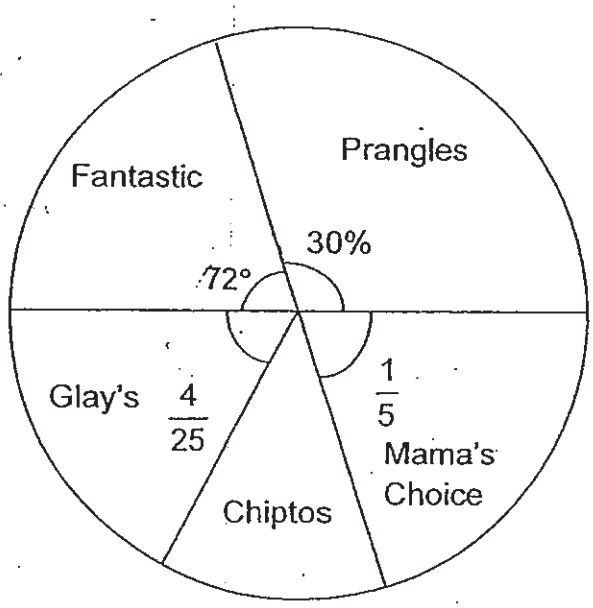
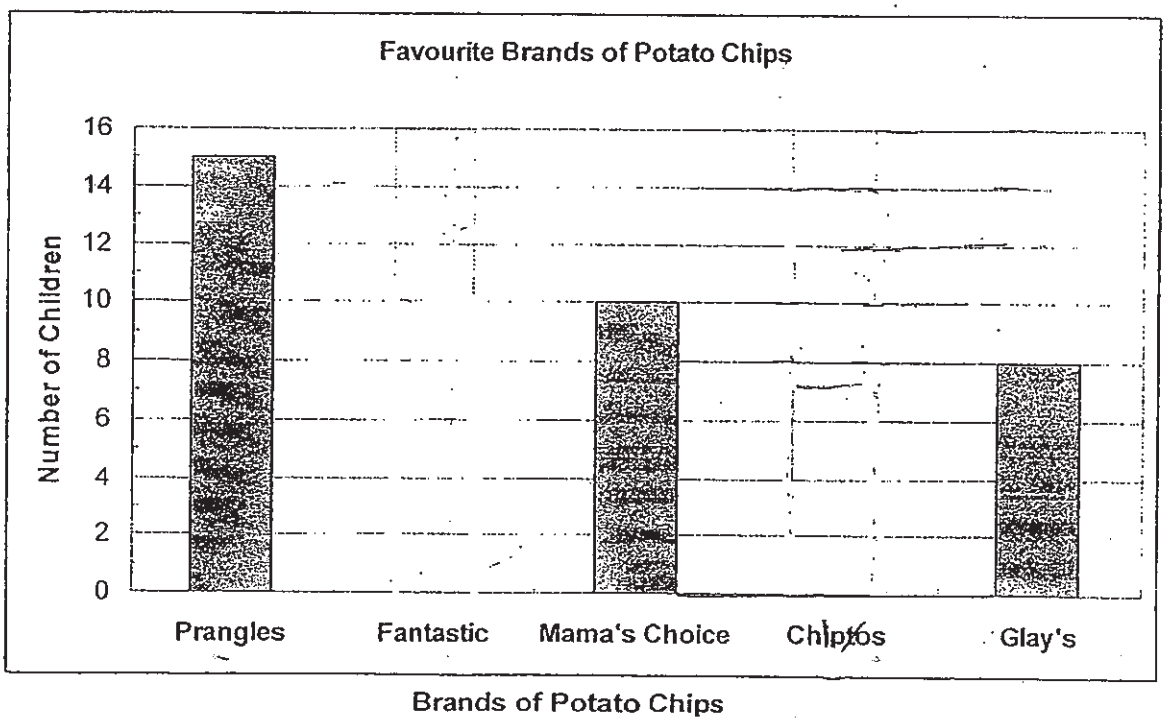
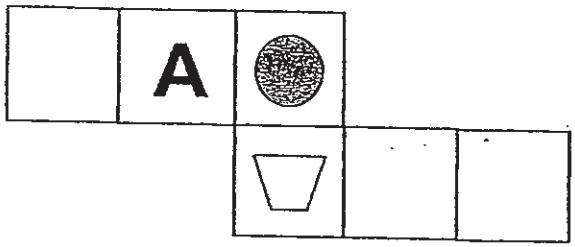
28 The pie chart below shows the result of a survey on the favourite brands of potato chips of 50 children. A bar graph is also drawn to show the same information but it is incomplete.
Complete the bar chart with the data given in the pie chart.



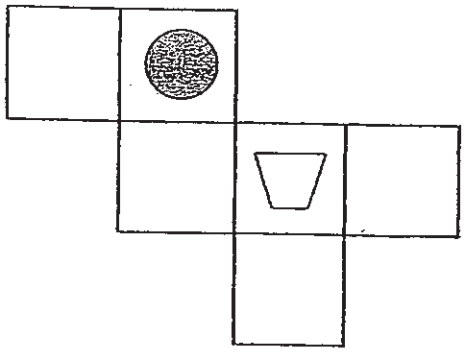


29 View 1 and 2 are two nets of the same cube. Using the information given in View 1, put a cross (X) on the face that is opposite the letter A on the cube in View 2.

View 1



View 2



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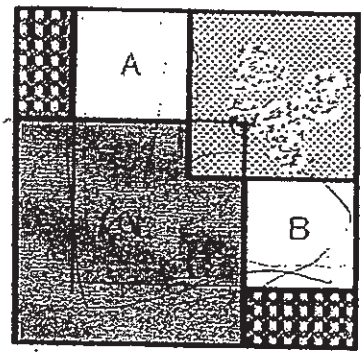
30 The figure below is formed by stacking 4 pieces of square paper one on top of another. The papers have different prints and sizes (of sides 3 cm, 4 cm, 5 cm and 6 cm). The 6-cm piece is placed at the bottom of the stack, followed by the 5-cm piece, then the 4-cm piece and the 3-cm piece is placed right on top. Find the sum of the area A and B.



Ans: _____ cm^2

NANYANG PRIMARY SCHOOL

SECOND SEMESTRAL EXAMINATION 2010

PRIMARY 6

MATHEMATICS

PAPER 2

DURATION: 1 HOUR 40 MINUTES

Paper 2 Total	/ 60
GRAND TOTAL	/ 100

Name: _____ ( )

Class: Primary 6 ( )

Date: 25 August 2010

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 At the Great Singapore Sale, Jennifer bought a handbag which was on a 30% discount off its original price. She paid $674.10 which was inclusive of a 7% GST on the discounted price. What was the original price of the handbag?

Ans: $_____

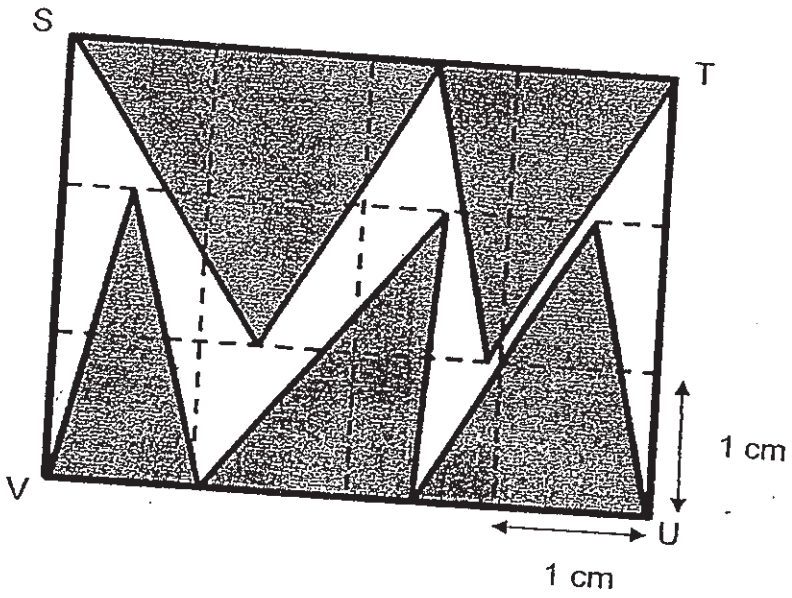
---

2 Once a computer program is executed, 3 chipmunks will appear on the screen. One minute later, the 3 chipmunks will yawn at the same time. After that, Chipmunk Alwin will yawn at intervals of 60 seconds, Chipmunk Simmon will yawn at intervals of 75 seconds and Chipmunk Tadore will yawn at intervals of 100 seconds. When the 3 chipmunks yawned at the same time for the third time, how many minutes has the program been running?

Ans: _____ min

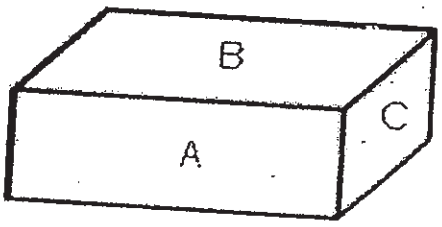
---

3 What fraction of the rectangle STUV is shaded?



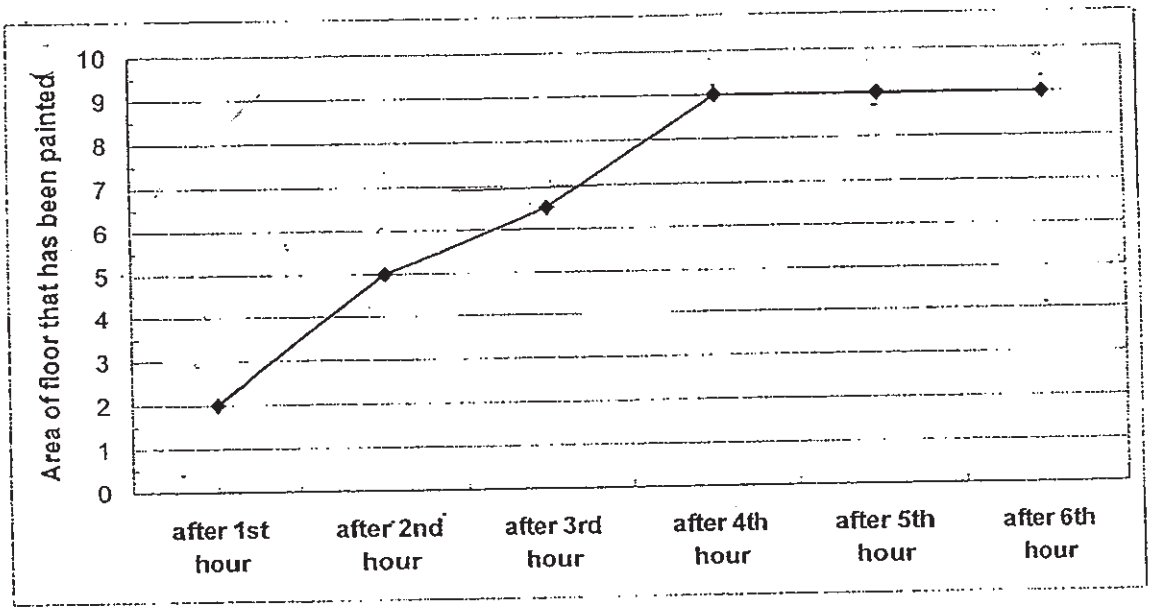
Ans: _____

4 On the cuboid below, the area of Face B is twice that of Face A and thrice that of Face C. Given that the length of the cuboid is 36 cm, find the volume of the cuboid.



Ans: _____ cm^3

5 The floor of a rectangular shaped room was painted by a worker. The line graph below shows the painted area of the floor of the rectangular room at regular time interval till the room was completely painted.



If the breadth of the rectangular room was 2 m, find the perimeter of the room.

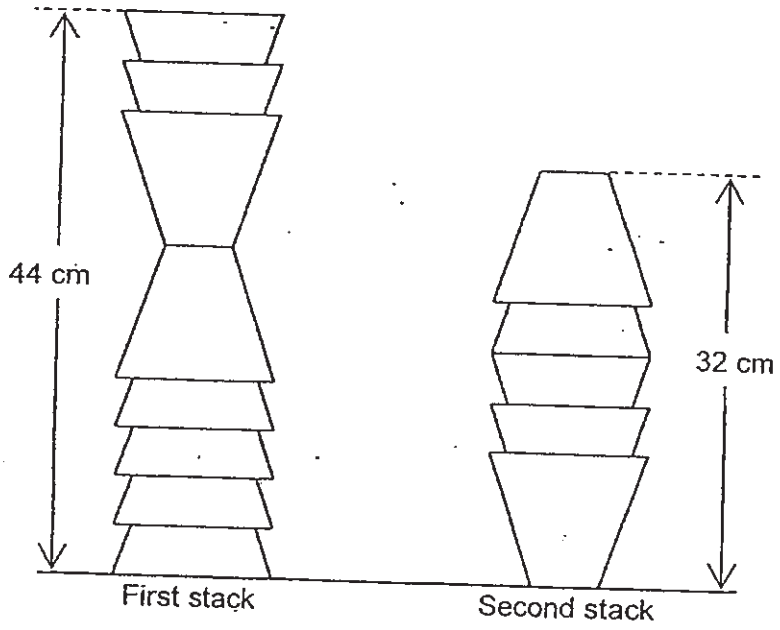
Ans: _____ m

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 two stacks of identical glasses. The height of the first stack of 8 glasses is 44 cm. The height of the second stack of 5 glasses is 32 cm.

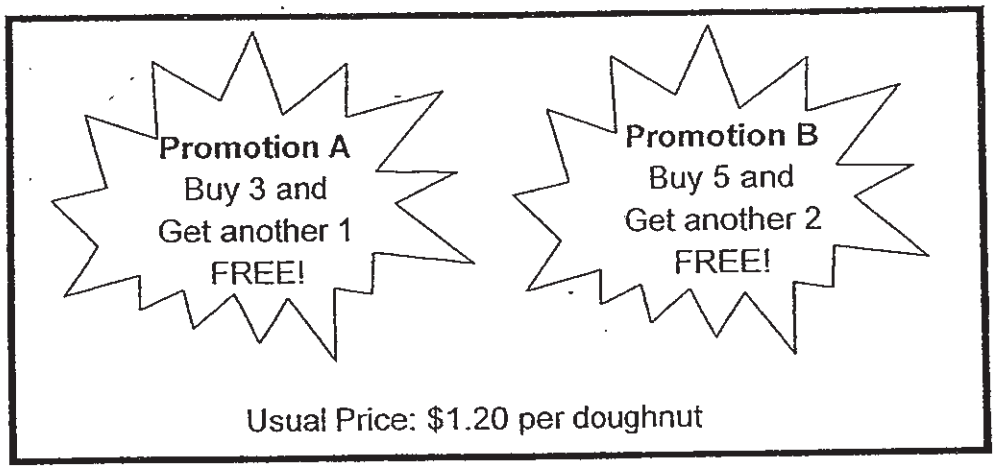


The height of the space in a shelf is 60 cm. What is the maximum number of glasses that you can put in a single stack to be placed in this shelf?

Ans: _____ [3]

---

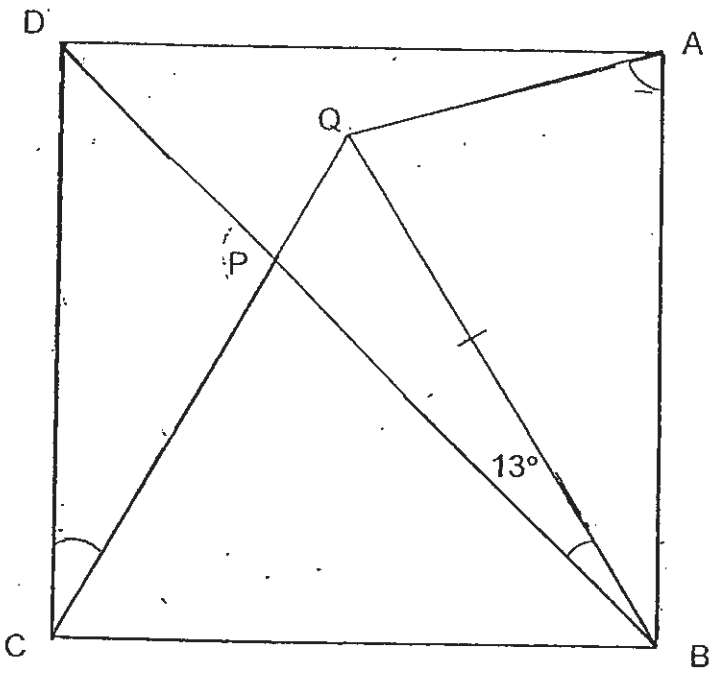
7 Mr Lim bought 320 doughnuts for a party at a shop with the following promotions:



What was the least amount of money that Mr Lim could have paid for the doughnuts?

Ans: _____ [3]

8 ABCD is a square. QPC and BPD are straight lines. BA = BQ and ∠PBQ = 13°.
Find
(a) ∠BAQ,
(b) ∠DCQ.



Ans: (a) _____ [1]

(b) _____ [2]

9 In the morning, there were 750 people at a funfair. 30% of them were girls and the rest are boys. In the afternoon, some more girls joined the funfair and the percentage of girls increased to 40% of the total number of people. How many girls joined the funfair in the afternoon?

Ans: _____ [3]

10 Kingsley planned to cycle from Town P to Town Q. If he were to cycle at 10 km/h, he would reach Town Q at 7.45 p.m. If he were to cycle at 12 km/h, he would reach Town Q at 7.15 p.m. What was the distance between Town P and Town Q?

Ans: _____ [3]

11 Diagram A shows a closed rectangular tank of dimensions 20 cm by 20 cm by 40 cm with a cube of edge 10 cm glued to its bottom left corner. The tank contains 12 litres of water.

Diagram B shows the same rectangular tank lying on its side. Find the height of the water level, in ~~centimeters~~ centimetres, corrected to 2 decimal places.

in diagram B

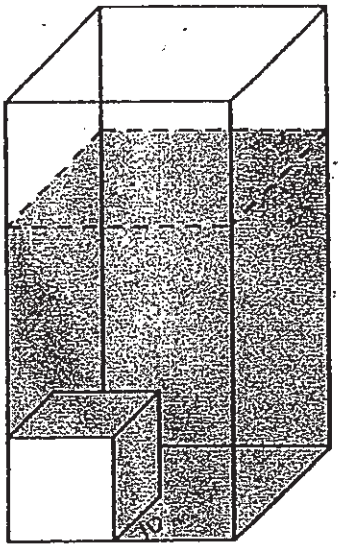


Diagram A

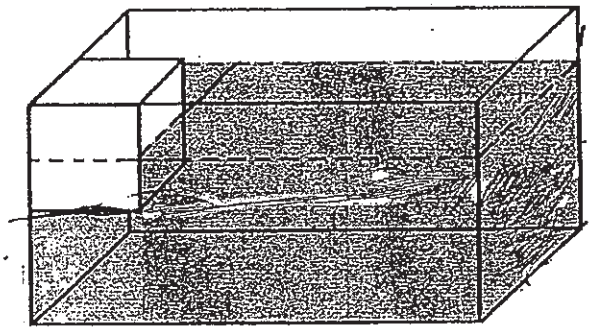


Diagram B

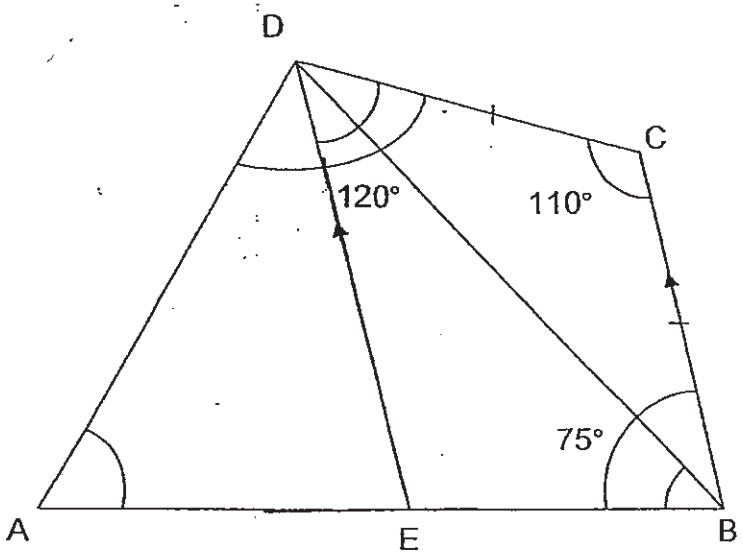
Ans: _____ [4]

12 ABCD is a quadrilateral and BCDE is a trapezium in which BC // ED.
$\angle ADC = 120°$, $\angle BCD = 110°$, $\angle ABC = 75°$ and BC = CD.
Find

(a) $\angle DAE$,

(b) $\angle CDE$ and

(c) $\angle DBE$.



Ans: (a) _____ [1]

(b) _____ [1]

(c) _____ [2]

13 Quiny and Mandy saved $5748.40 altogether. 0.4 of Quiny's savings was $431.50 more than $\frac{2}{5}$ of Mandy's savings. How much more money than Quiny did Mandy save?

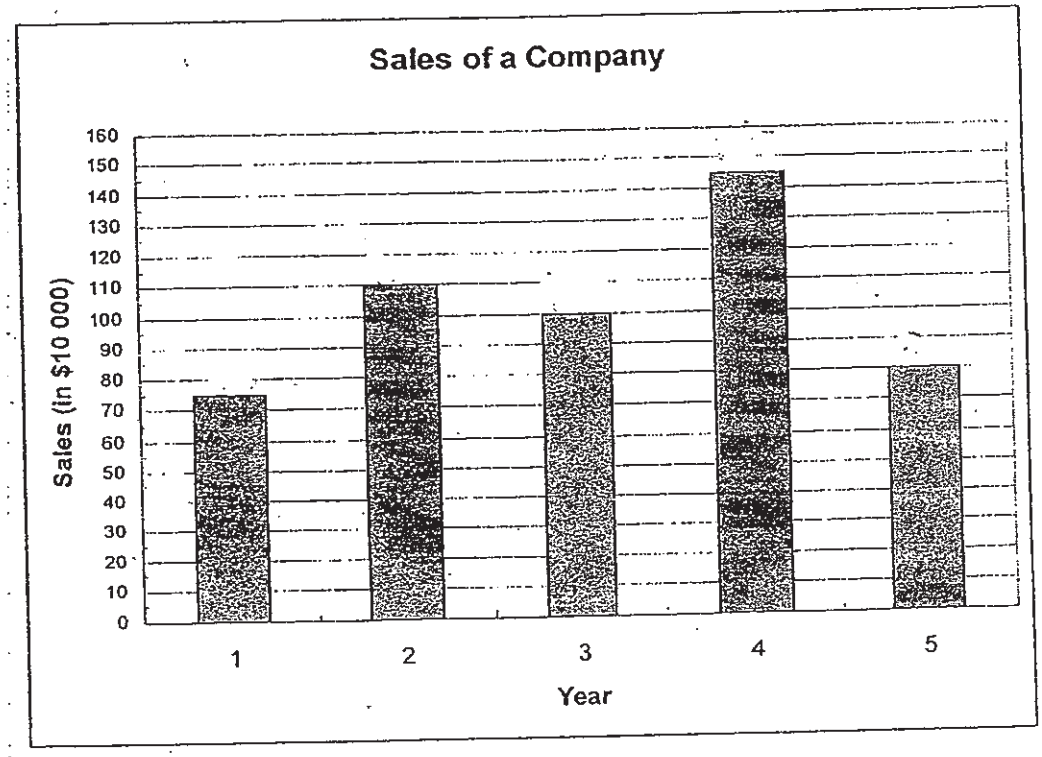
Ans: _____ [4]

14 The bar graph shows the sales of a company over a number of years.

(a) In which year was the value of sales $\frac{3}{4}$ that of Year 3?

(b) Find the average sales of the company over the 5 years.

(c) The value of sales in Year 6 increases the average sales of the company over the 6 years to \$1 070 000. What was the value of sales in Year 6?



Ans: (a)_____ [1]

(b)_____ [1]

(c)_____ [2]

15 The table below shows the day of the week that 1st January falls on from the year 1981 to 2000. Note that Day 1 of a week is a Monday and Day 7 is Sunday. There are 31 days in the month of January.

Year	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
1st January falls on Day ...	4	5	6	7	2	3	4	5	7	1

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
1st January falls on Day ...	2	3	5	6	7	1	3	4	5	6

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1st January falls on Day ...	A	B	C	D	E	F	G	H	I	J

(a) What number does the letter C represent?

(b) What number does the letter F represent?

(c) Which day of the week will 1st February 2012 fall on?

Ans: (a) _____ [1]

(b) _____ [1]

(c) _____ [2]

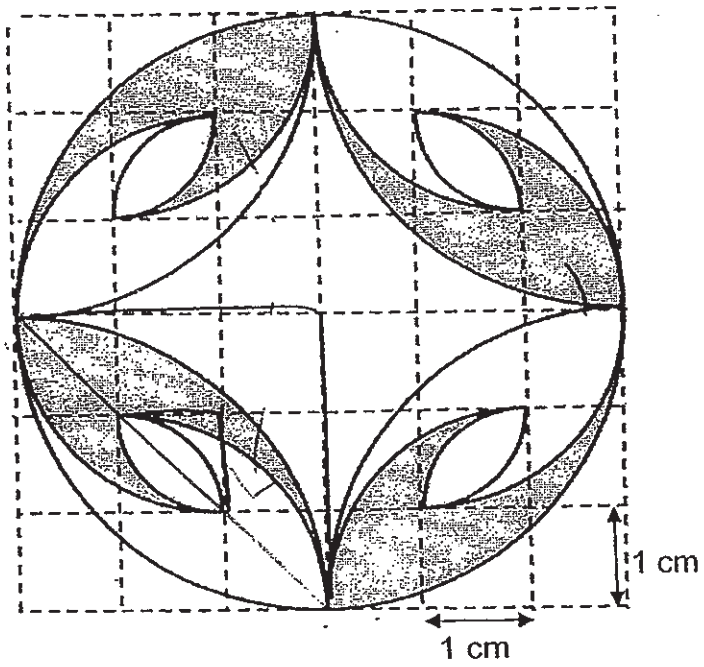
16 Mrs Reuten bought some pizzas for a group of children. The girls received thrice as many pizzas as the boys. There were an equal number of girls and boys. Each boy ate $\frac{2}{9}$ of a pizza and the boys finished all the pizzas given to them. Each girl ate $\frac{1}{6}$ of a pizza and the girls had $4\frac{1}{2}$ pizzas left. How many pizzas did Mrs Reuten buy?

Ans: _____ [5]

17 There were some blue marbles and white marbles in a bag. If 70 blue marbles were to be removed from the bag, the ratio of the number of blue marbles to the number of white marbles would be 3 : 4. If 112 white marbles were to be removed from the bag instead, the ratio of the number of blue marbles to the number of white marbles would be 8 : 7. When another 48 more blue marbles were to be added into the bag, what percentage of all the marbles would be blue marbles? at last

Ans: _____ [5]

18 The figure below is created using the curved lines (arcs) of quadrants with radius 1 cm, 2 cm and 3 cm. Find the area of the shaded parts. (Take π as 3.14)



Ans: _____ [5]

END OF PAPER

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Answer Ke

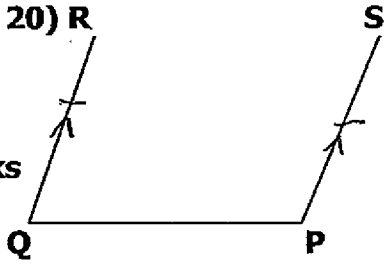
EXAM PAPER 2010

SCHOOL : NANYANG PRIMARY
SUBJECT : PRIMARY 6 MATHEMATICS

TERM : PERLIMINARY

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

16)844 **17)$3\frac{1}{5}$** **18)$91\frac{2}{3}$** **19)70** **20)**

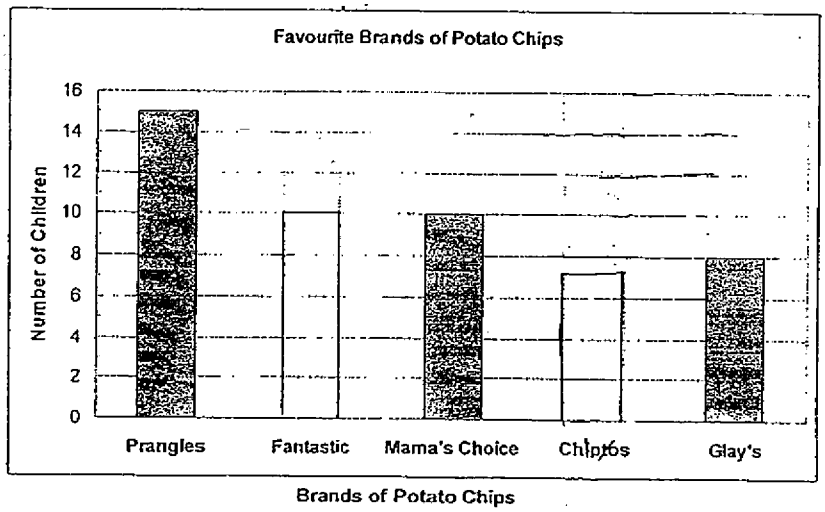


21)10:6:3 **22)5** **23)164.5** **24)$19\frac{3}{4}$**

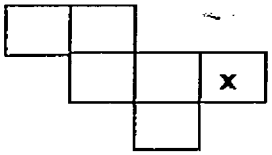
25)C,E,S **26)$1\frac{4}{5}$ min** **27)a)$\frac{(168 - x + x)}{2}$ marks**

b)88 marks

28)



29)



30)8cm2

Paper 2

1)107%-->$674.10 100%-->$674.10/107 x 100 = $630 70%-->$630 100%-->$630/70 x 100 = $900	2)600÷60 = 10 min 10 + 1 = 11 min
3) ½ x 4 x 2 =4 $\frac{4+4}{12}$ = 8/12 = 2/3	4)A= 36 x 1u = 36u B= 36 x 2u = 72u C= 2u x 1u = $2u^2$ $2u^2$ = 72u/3 = 24u 1u = 24u/2u = 12 Vol = 36 x 24 x 12 = 10368cm^2
5)Area = $9m^2$ B = 9÷ 2 = 4.5m Perimeter = 4.5 + 4.5 + 2 +2 =13m	6)44 – 32 = 12 12÷3 = 4 4 x 6 =24 44 – 24 = 20 20÷ 2 =10 60 – 10 = 50 50÷ 4 ≈12 12 + 1 = 13 glasses
7)320÷7 = 45R5 45 x 5 = 225 225 x $1.20 = $270 4 x $1.20 = $4.80 $270 = $4.80 = $274.80	8)a)∠QBA = 45 – 13 =32 ∠BAQ = 180 – 32 /2 = 148/2 = 74° b)∠BCQ = 180 – 45 – 13/2 =61° ∠DCQ = 90 – 61 = 29°
9)girls = 30/100 x 750 = 225 Boys = 750 – 225 = 525 100% - 40% = 60% 60% = 525 40% = 525/60 x 40 = 350 350 – 225 = 125 girls	10)T = d/s d/10 – d/12 = 6d/60 – 5d/60 =d/60 7.45pm→7.15pm = ½h d/60 = ½ = 30/60 d = 30km
11)vol of water below cube →40 x 20 x10 = 8000 12000 – 8000 = 4000 Area of the cube (40x20) – (10 – 10) = 700 4000÷ 700 = $5\frac{5}{7}$ 10 + $5\frac{5}{7}$ = $15\frac{5}{7}$ = 15.71cm	12)a)55° b)70° c)40°

13)Q + M →$5748.4 0.4Q – 0.2M→$431.50 0.2Q – 0.1M→$215.75 Q – 0.5M→$1078.75 1.5M→$5748.40 - $1078.75 =$4669.65 M→$466.65÷3 x 2 =$3113.10 $3113.10 - $2635.30 = $477.80	14)a)100÷4 x 3 =75 (year 1) b)(75+110+100+145+80) x 10000 = 5100000 5100000 ÷ 5 = $1020000 c)1070000 x 6 = 6420000 6420000 – 5100000 =$1320000
15)a)3 b)7 c)Wednesday	16)8 pizzas
17)49.6%	18)9.12cm^2