Index No. | | | | | | – | |

PEI CHUN PUBLIC SCHOOL

PRELIMINARY EXAMINATION 1, 2009

MATHEMATICS

PAPER 2

Time: 1 h 40 min

Name : _____ ( )

Class : Primary 6 ____

Date : 4 August 2009

Parent's Signature: _____

Paper 1 (Booklet A)	/20
Paper 1 (Booklet B)	/20
Paper 2	/60
TOTAL	/100

INSTRUCTIONS TO CANDIDATES

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.
ANSWER ALL QUESTIONS.
SHOW YOUR WORKING CLEARLY AS MARKS ARE AWARDED FOR CORRECT WORKING.
WRITE YOUR ANSWERS IN THIS BOOKLET.
YOU ARE ALLOWED TO USE A CALCULATOR.

191

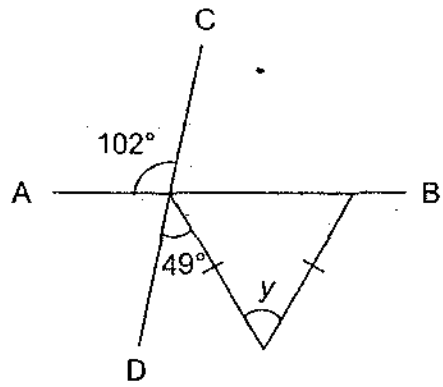
Questions **1** to **5** carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space

Do not write in this space

1. In the space below, draw a triangle ABC in which AC = 4 cm and $\angle CAB = 50°$. The line AB has been drawn for you.

2. In the figure below, AB and CD are straight lines. Find $\angle y$.



Ans : _____ °

3. Mrs Mah bought 7 trays of eggs. Each tray contained 36 eggs. She broke $\frac{4}{9}$ of the eggs and used $\frac{5}{7}$ of the unbroken eggs. How many eggs had she left?

Ans : _____

SCORE

4. The ratio of the number of sweets in box A to the number of sweets in box B was 12 : 7. Belinda removed 75% of the sweets in box A. What percentage of the sweets in box B must be transferred to box A so that there would be an equal number of sweets in the two boxes?

Do not write in this space

Ans : _____ %

5. Mrs Poh bought 7 T-shirts and 4 pairs of shorts. Mrs Wang bought 4 T-shirts and 7 pairs of shorts. Each pair of shorts cost $17.30. Mrs Wang paid $24.15 less than Mrs Poh. How much **more** did each T-shirt cost than each pair of shorts?

Ans : $_____

SCORE

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. (Total: 50 marks)

Do not write in this space

6. A man bought some prawns at $2.75 per kg. He sold it at $5.40 per kg. How many kilograms of prawns must he sell to earn $206.70?

Ans : _____ [3]

7. The table below shows how marks are awarded for answering 72 questions in a Maths Quiz.

Every correct answer	Award 5 marks
Every question not answered	0 mark
Every wrong answer	Deduct 3 marks

Paul did not answer 6 questions and he scored 178 marks. How many questions did he answer correctly?

Ans : _____ [3]

SCORE

8. Mrs Krishnan gave 184 stickers to some of her pupils in the class. $\frac{1}{4}$ of the pupils received 8 stickers each, $\frac{1}{8}$ of them received 12 stickers each and $\frac{3}{8}$ of them received 6 stickers each. The rest of the pupils were not given any stickers. How many pupils were there in the class?

Do not write in this space

Ans : _____ [3]

SCORE

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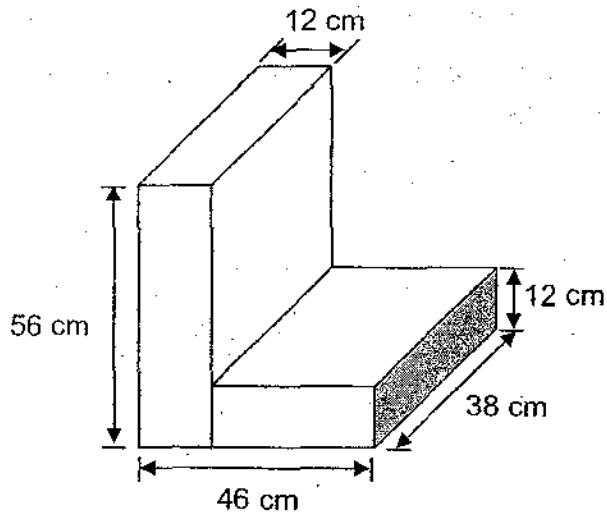
9. The figure below is made up of 2 rectangular blocks. Find the volume of the figure.

Do not write in this space

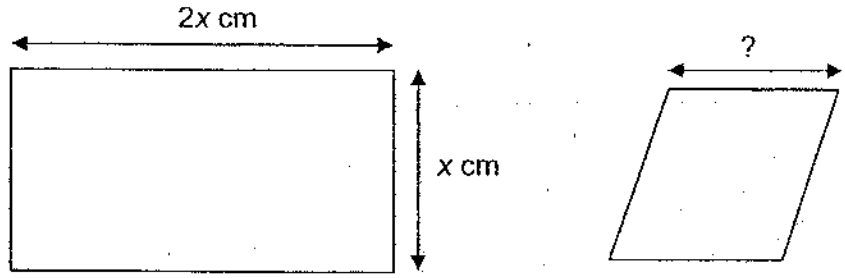


Ans : _____ [3]

SCORE

10. In the figure shown below, the perimeter of the rectangle is 2 times the perimeter of the rhombus. What is the length of each side of the rhombus? Express your answer in terms of x in its simplest form.

Do not write in this space



Ans : _____ [3]

SCORE

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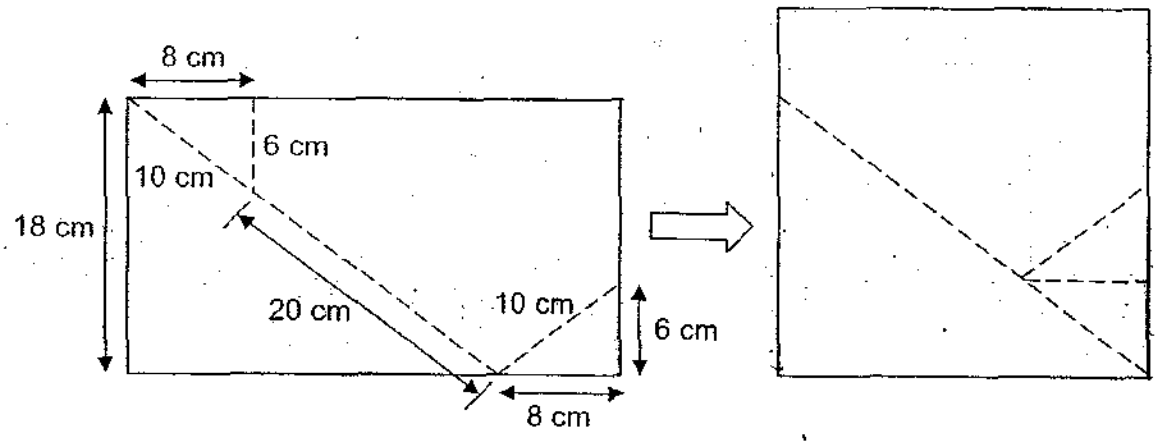
11. Siuzhen had a rectangular sheet of paper. She cut along the dotted lines as shown below into 4 pieces of paper. Then she arranged the cut-out pieces to form a square.

Do not write in this space



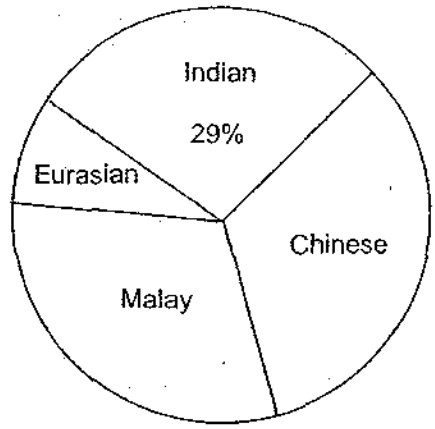
What was the difference in perimeter between the rectangle and the square?

Ans : _____ [3]

SCORE

12. The pie chart below shows the number of people from 4 different races taking part in a walkathon.

Do not write in this space



There was an equal number of Malay and Chinese participants. The total number of Chinese, Malay and Eurasian participants was 504 more than the number of Indian participants. The ratio of the number of Malay participants to the number of Eurasian participants was 5 : 2.

(a) How many participants were there altogether?

(b) How many Eurasian participants were there?

Ans : (a) _____ [2]

(b) _____ [2]

SCORE

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13. A lorry started from Town A and travelled towards Town B. At noon, when the lorry was 80 km from Town A, a car which was 20 km/h faster than the lorry started from Town B and travelled towards Town A. When the car reached Town A at 6 p.m., the lorry had travelled only 90% of its journey. Find the speed of the lorry in km/h.

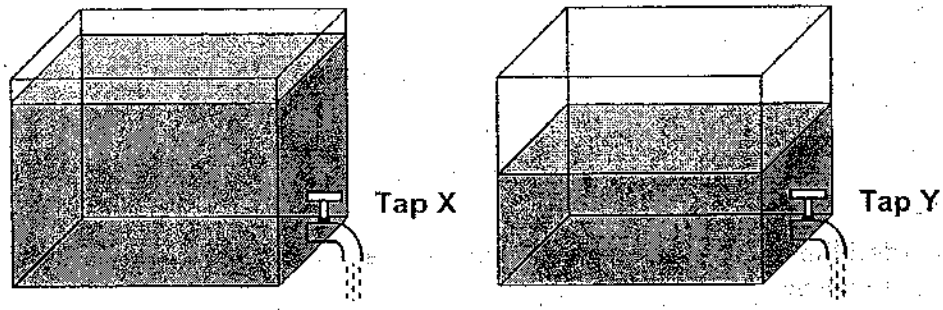
Do not write in this space

Ans : _____ [4]

SCORE

14. The figures below show 2 rectangular tanks, A and B. Tank A contained 5184 ℓ of water and Tank B contained 1755 ℓ of water.

Do not write in this space



Tank A Tank B

Tap X and Tap Y were turned on at 8 a.m. Water flowed out of Tap X at 34 ℓ/min and out of Tap Y at 7 ℓ/min. When both tanks had the same volume of water, both taps were turned off.

(a) At what time were the taps turned off?

(b) What was the volume of water in each tank when the taps were turned off?

Ans : (a) _____[2]

(b) _____[2]

SCORE

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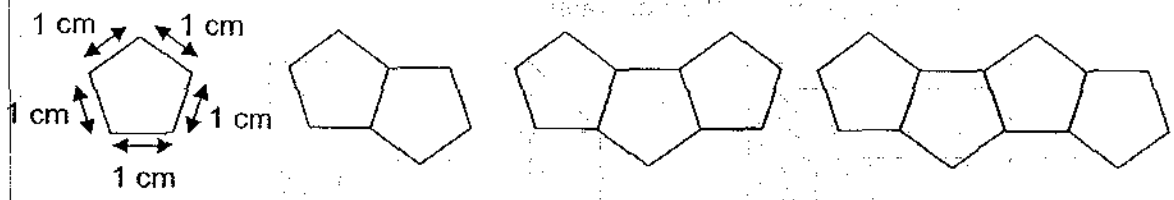
15. Zaini used ⬠ tiles to make the figures below.

Do not write in this space



Pattern 1 Pattern 2 Pattern 3 Pattern 4

He recorded the number of ⬠ tiles used to make the figures and their perimeters in the table below.

Pattern	Total Number of ⬠ tiles used	Perimeter of figure (cm)
1	1	5
2	2	8
3	3	11
4	4	14

(a) What is the perimeter of the figure in
(i) Pattern 5?
(ii) Pattern 864?

(b) What is the **greatest** number of ⬠ tiles that can be put together to form a pattern that has a perimeter less than 10 000 cm?

Ans : (a) (i) _____ [1]

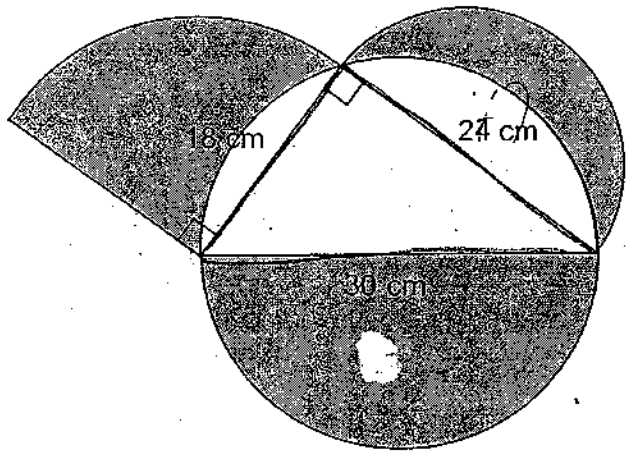
(ii) _____ [2]

(b) _____ [2]

SCORE

16. The figure below is made up of two semicircles, a quadrant and a right-angled triangle. The length of the sides of the triangle are 18 cm, 24 cm and 30 cm. Find the total area of the shaded parts of the figure.
Give your answer to 2 decimal places.

Do not write in this space



Ans : _____[5]

SCORE

17. Mr Sum had 120 ovens. He sold 40% of the ovens at their usual price and half of the remainder at a discount of 15% of the usual price. He sold the rest of the ovens at their cost price of $380 each. He earned $1878. What was the price of each oven after the discount?

Do not write in this space

Ans: _____ [5]

SCORE

18. Jimmy had some rulers, pencils and erasers. The number of pencils was three times the number of erasers. He sold ~~184 rulers and~~ an equal number of pencils and erasers as well as 184 rulers. The ratio of the number of rulers left to the number of pencils left was 5 : 6. The ratio of the number of pencils left to the number of erasers left was 9 : 1. He had 780 pencils and erasers left altogether. What was the total number of rulers, pencils and erasers he had at first?

Do not write in this space

Ans : _____ [5]

End of this Booklet

Set by : Mr Enrico Tong
Vetted by: Mrs Agnes Chua, Mrs Valerie Loo, Mr Teng B C

SCORE

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PEI CHUN PUBLIC SCHOOL

PRELIMINARY EXAMINATION 1, 2009

MATHEMATICS

PAPER 1

(BOOKLET A)

Additional materials: Optical Answer Sheet (OAS) **Total Time For Booklets A & B : 50 min**

Name : _____ ( )

Class : Primary 6 ___

Date : 4 August 2009

INSTRUCTIONS TO CANDIDATES

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

FOLLOW ALL INSTRUCTIONS CAREFULLY.

ANSWER ALL THE QUESTIONS.

SHADE YOUR ANSWERS IN THE OPTICAL ANSWER SHEET (OAS) PROVIDED.

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. What is the value of the digit 7 in 857 013?

   (1) 7

   (2) 70

   (3) 700

   (4) 7000 ( )

2. In 148.59, what does the digit 9 stand for?

   (1) 9 hundredths

   (2) 9 tenths

   (3) 9 ones

   (4) 9 tens ( )

3. Find the value of $2n - \frac{n}{3}$ when $n = 9$.

   (1) 26

   (2) 15

   (3) 3

   (4) 5 ( )

4. Jeremiah boarded a plane from Singapore at 23 47. He reached his destination at 05 10 the next day. How long was his journey?

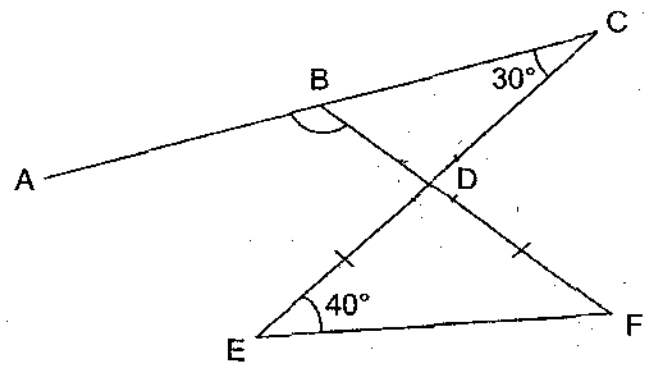
   (1) 6 h 37 min

   (2) 6 h 3 min

   (3) 5 h 23 min

   (4) 4 h 57 min ( )

5. In the figure below, ABC, CDE and BDF are straight lines.



Find ∠ABD.

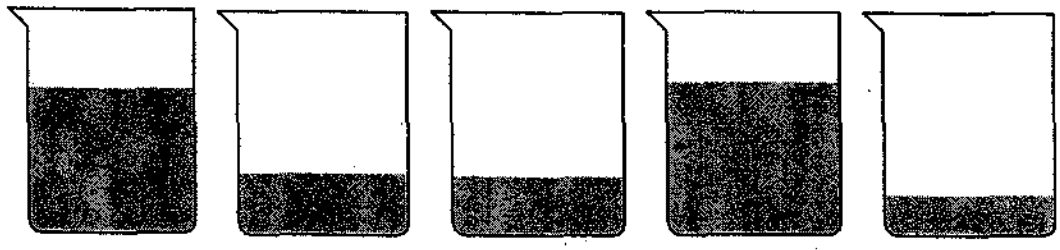
(1) 50°

(2) 80°

(3) 100°

(4) 130° ( )

6. Each container below can hold 500 mℓ of water to its brim.



The total volume of water in the 5 containers is about _____ ℓ.

(1) 1

(2) 2

(3) 3

(4) 4 ( )

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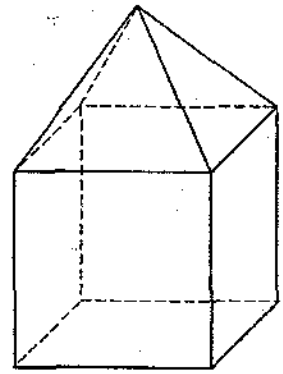
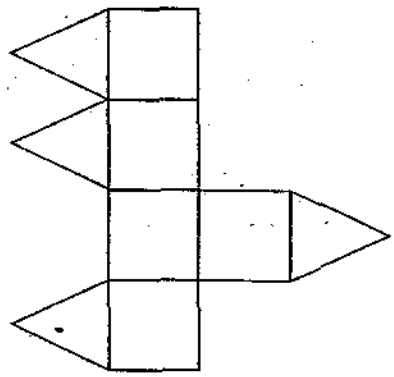
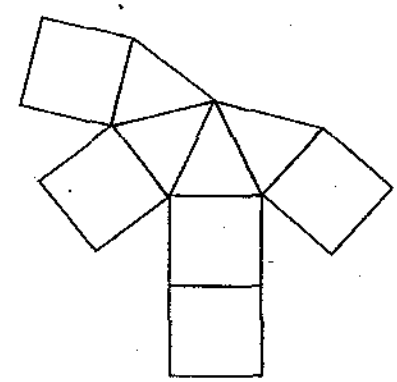
7. The figure below shows a solid.



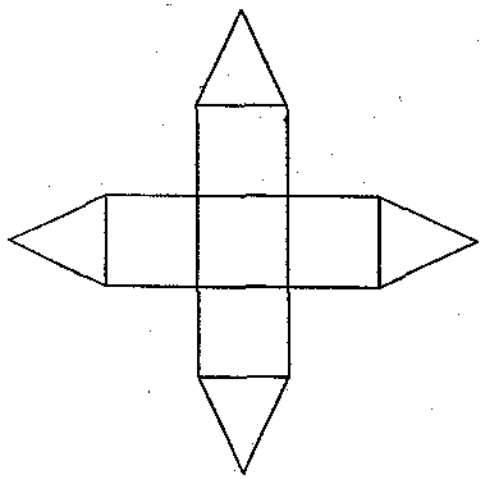
Which of the following nets **cannot** be folded to form the solid shown above?



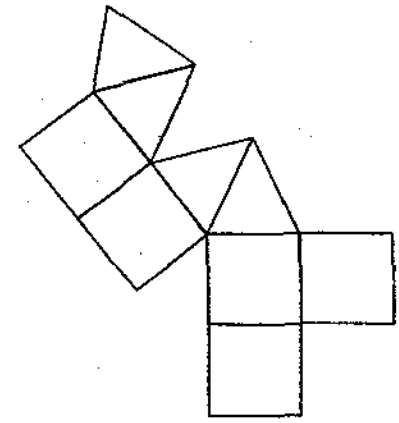
(1)



(2)



(3)



(4)

( )

8. Arrange the following fractions from the largest to the smallest.

$$\frac{3}{7} \quad , \quad \frac{2}{3} \quad , \quad \frac{3}{10}$$

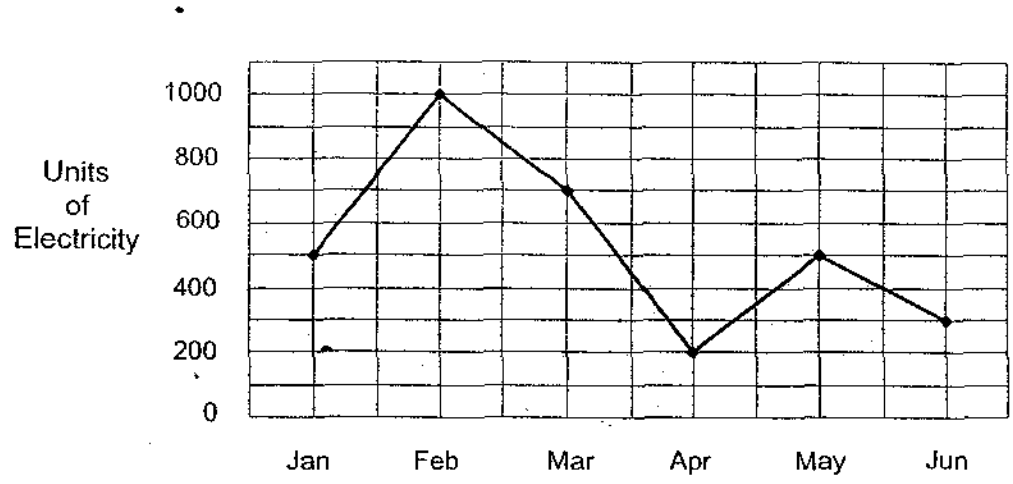
(1) $\frac{3}{10}$, $\frac{3}{7}$, $\frac{2}{3}$

(2) $\frac{3}{10}$, $\frac{2}{3}$, $\frac{3}{7}$

(3) $\frac{2}{3}$, $\frac{3}{10}$, $\frac{3}{7}$

(4) $\frac{2}{3}$, $\frac{3}{7}$, $\frac{3}{10}$ ( )

9. The graph below shows the consumption of electricity in a home from January to June.



The decrease in consumption of electricity was the **greatest** from _____.

(1) Jan to Feb

(2) Feb to Mar

(3) Mar to Apr

(4) May to Jun ( )

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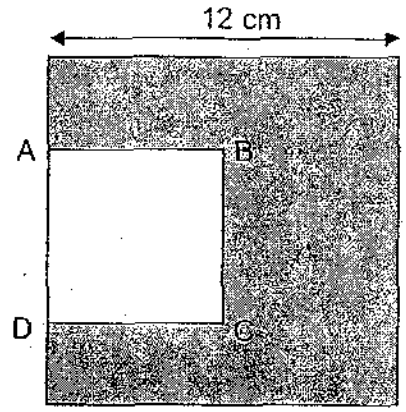
10. 2 squares are arranged as shown in the figure below. The area of the shaded part is 108 cm^2.



What is the perimeter of Square ABCD?

(1) 36 cm

(2) 27 cm

(3) 24 cm

(4) 6 cm ( )

11. The table below shows the rates for rental of bicycles.

	Type of bicycle	
	Racer Bike	Mountain Bike
For the first $\frac{1}{2}$ hour	\$4.50	\$4.00
For every subsequent $\frac{1}{2}$ hour or part thereof	\$2.00	\$1.50

Mr Khor rented a Racer Bike and a Mountain Bike for 1 h 15 min. How much did he pay?

(1) \$15.50

(2) \$13.75

(3) \$12.00

(4) \$10.25 ( )

12. The total mass of 3 wooden cupboards and 2 metal cupboards is 252 kg. Each metal cupboard is 3 times as heavy as a wooden cupboard. What is the difference in mass between a metal cupboard and a wooden cupboard?

(1) 28 kg

(2) 56 kg

(3) 63 kg

(4) 126 kg ( )

13. After spending \$546 on a sofa set and $\frac{1}{4}$ of the remaining money on a table, Johnny had $\frac{2}{5}$ of his money left. How much money did he have at first?

(1) \$728

(2) \$910

(3) \$1170

(4) \$1560 ( )

14. Mrs Phua had a packet of flour. She used $\frac{1}{5}$ of the flour to bake 2 cakes. She baked another 5 cakes with the remaining 11.2 kg of flour. What was the average amount of flour she used for each cake?

(1) 2.24 kg

(2) 2 kg

(3) 1.6 kg

(4) 0.96 kg ( )

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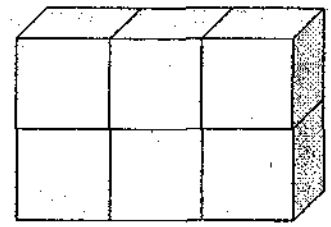
15. The figure below is made up of 6 identical cubes. The volume of the figure is 384 cm^3.



What is the total surface area of the figure?

(1) 1408 cm^2

(2) 352 cm^2

(3) 176 cm^2

(4) 88 cm^2 ( )

End of Booklet A

Index No. [ ][ ][ ][ ][ ] – [ ]

PEI CHUN PUBLIC SCHOOL

PRELIMINARY EXAMINATION 1, 2009

MATHEMATICS

PAPER 1

(BOOKLET B)

Total Time For Booklets A & B : 50 min

Name : _____( )

Class : Primary 6 ___

Date : 4 August 2009

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-P3

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)

Do not write in this space

16. Find the value of 401×7.

Ans : _____

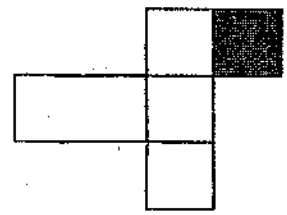
17. Express 1 kg as a percentage of 800 g.

Ans : _____ %

18. Find the value of $\frac{5}{8} \div 15$. (Give your answer as a fraction in its simplest form.)

Ans : _____

19. The diagram below shows the net of a cube. The shaded part is the base of the cube. Shade the face that is the top of the cube.



SCORE

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16. Find the value of 401×7.

Ans : _____

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Ans : _____ %

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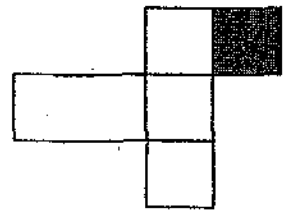
Ans : _____

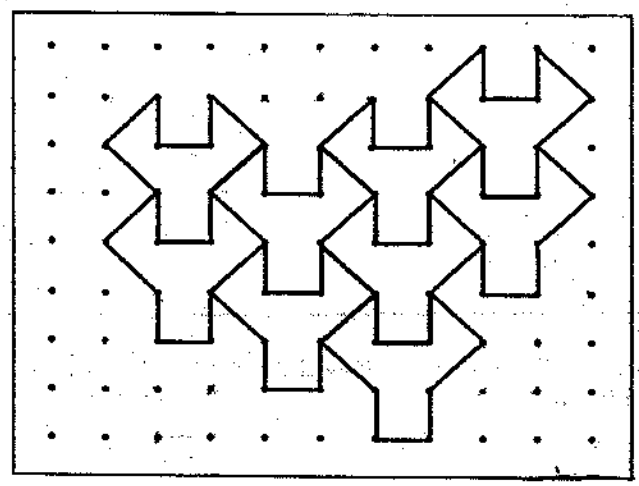
19. The diagram below shows the net of a cube. The shaded part is the base of the cube. Shade the face that is the top of the cube.



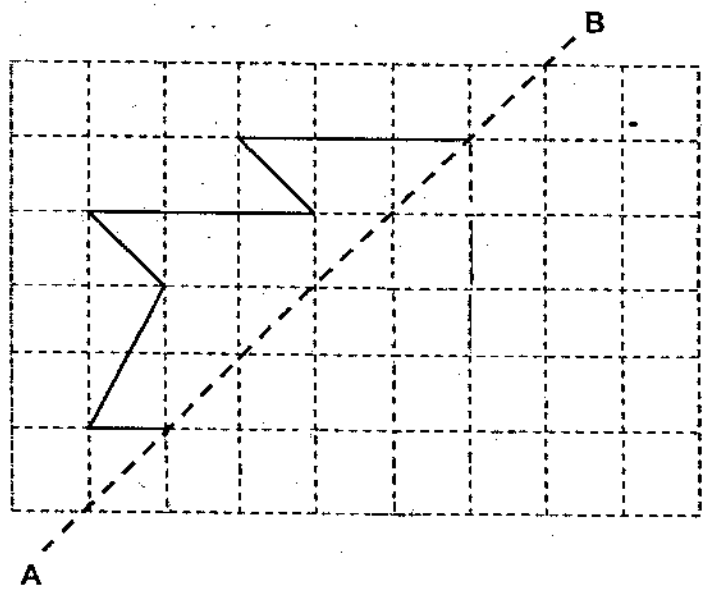
SCORE

20. The pattern in the box shows part of a tessellation. Extend the tessellation by drawing **three** more unit shapes in the space provided within the box.

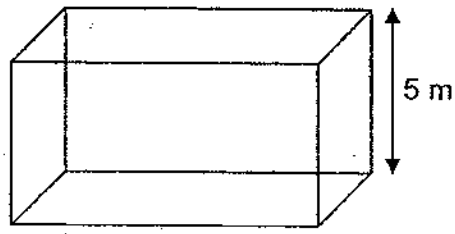
Do not write in this space



21. Complete the figure below so that the dotted line AB is the line of symmetry.



22. A rectangular tank has a base area of 16.1 m^2 and a height of 5 m. What is the capacity of the tank?



Ans : _____ m^3

SCORE

1/25

23. A sum of money is shared among Samy, Henry and Jimmy in the ratio 4 : 5 : 9. What fraction of the sum of money is Samy's share? (Give your answer in its simplest form.)

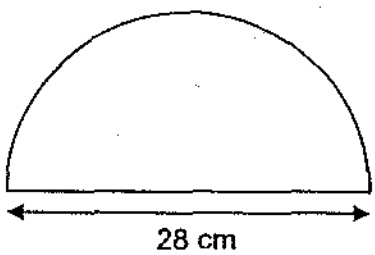
Do not write in this space

Ans : _____

24. A motorcyclist took 20 minutes to travel a distance of 32 km. What was his average speed in km/h?

Ans : _____ km/h

25. The figure below shows a semicircle of diameter 28 cm. What is the area of the semicircle? (Take $\pi = \frac{22}{7}$)



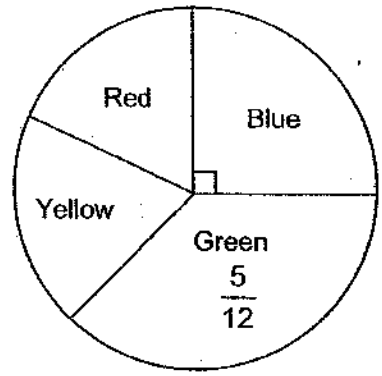
Ans : _____ cm^2

SCORE

Questions **26** to **30** carry 2 marks each. Show your working clearly in the space below each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write in this space

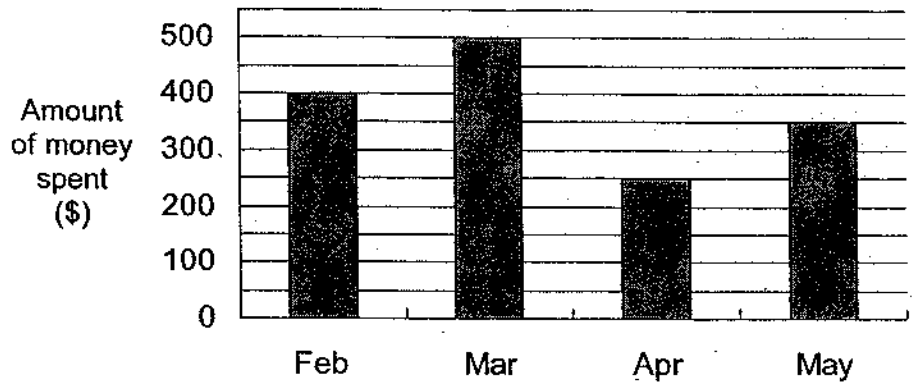
26. The pie chart below shows the favourite colours of a group of pupils in a school.



Each pupil chose only one colour. 102 pupils chose blue. How many pupils chose red and yellow altogether?

Ans : _____

27. The graph below shows the amount of money Calvin spent from February to May.



Calvin earned $1800 each month. How much did he save from February to May altogether?

Ans : $_____

SCORE

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28. The table below shows the postage rates for sending parcels to a certain country.

Do not write in this space

First 200 g	$3.80
Per additional step of 250 g	$2.20

What is the cost of sending a parcel of mass $1\frac{1}{2}$ kg to this country?

Ans : $_____

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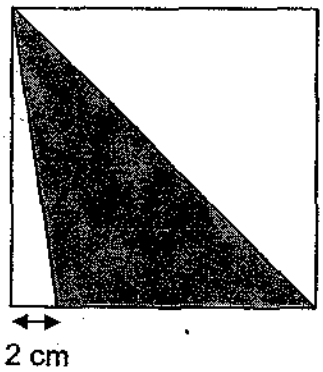
29. The figure below shows a shaded triangle in a square. The perimeter of the square is 48 cm. Find the area of the shaded triangle.



Ans : _____ cm^2

SCORE

30. Bala had some books. He gave Clarice half of the books plus 7 books. He then gave Fatimah half of the remaining books plus 14 books. Bala had 15 books left. How many books had Bala at first?

Do not write in this space

Ans : _____

End of Booklet B

Set by : Mr Enrico Tong
Vetted by: Mrs Agnes Chua, Mrs Valerie Loo , Mr Teng B C

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ANSWER SHEET

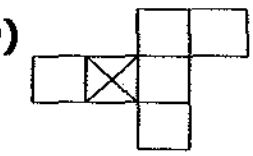
EXAM PAPER 2009

SCHOOL : PEI CHUN PRIMARY
SUBJECT : PRIMARY 6 MATHEMATICS

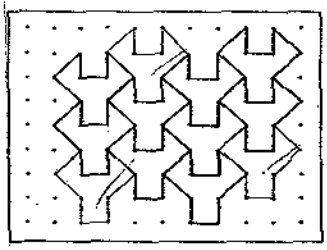
TERM : PRELIM 1

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

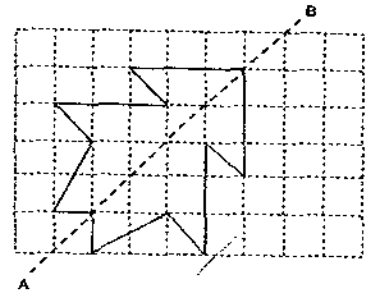
16)2807 **17)125%** **18)1/24** **19)**



20)



21)



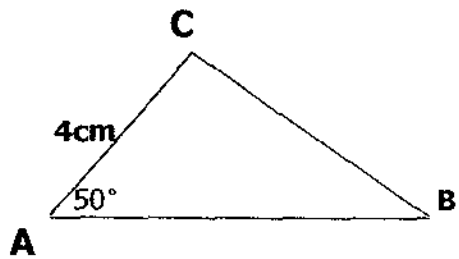
22)80.5m3 **23)2/9** **24)96km/h** **25)308cm2**

26)136 **27)$5700** **28)$17** **29)60cm2**

30)130

Paper 2

1)



2)102° -49° =53°
∠y=180° -53° x2=74°

3)Total→36x7=252
2/9x252=140
Left→140/7x2=40

4)$28\frac{4}{7}\%$

5)$8.05

6)5.40-2.75=2.65
?kg→206.70÷2.65=78kg

7)47

8)32

9)A→12x38x56=25536
B→(46-12)x38x12=15504
Volume→15504+25536=41040cm3

10)perimeter of rectangle→2X x 2+ X x 2=4X+2X=6X
Perimeter of Rhombus→6X÷2=3X
Length→3X/4cm

11)Perimeter square→(6+18)x4=96cm
Perimeter of rectangle→(8+24)x2+18x2=100
Difference→100-96=4cm

12)a)504→100%-29%-29%=42%
Altogether→504/42x100=1200
b) C : M : E : Total
5 : 5 : 2 : 12
C+M+E→1200 – 1200/100 x 29=852
Eurasian→ 852/12x 2=142