

Name: \_\_\_\_\_ ( )

26 August 2010

Class: P 6 \_\_\_\_\_



CATHOLIC HIGH SCHOOL

PRIMARY SIX

PRELIMINARY EXAMINATION 2 (VA2)

PAPER 1

(BOOKLET A)

15 questions

20 marks

Total Time for Booklets A and B: 50 min

**INSTRUCTIONS TO CANDIDATES**

Do not open this booklet until you are told to do so.

Follow all instructions carefully.

Shade your answers in the Optical Answer Sheet (OAS) provided.

You are not allowed to use a calculator.

Answer all questions.

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 on the Optical Answer Sheet.  
All diagrams are not drawn to scale. (20 marks)

1. The number of people who performed at a stadium is 279 493.  
Express this number to the nearest thousand.

- (1) 270 000  
(2) 279 000  
(3) 280 000  
(4) 300 000 ( )
- 

2. Express 4 hundreds, 3 tens, 4 tenths and 3 hundredths as a decimal.

- (1) 403.34  
(2) 403.43  
(3) 430.34  
(4) 430.43 ( )
- 

3. A machine can pack 15 boxes of sweets in 10 minutes. At this rate, how many boxes of sweets can be packed in  $1\frac{1}{2}$  hours?

- (1) 135  
(2) 150  
(3) 225  
(4) 1350 ( )
- 

4. If  $\frac{1}{3}$  of X is equal to  $\frac{2}{5}$  of Y, find the ratio of X : Y.

- (1) 3 : 5  
(2) 5 : 3  
(3) 5 : 6  
(4) 6 : 5 ( )

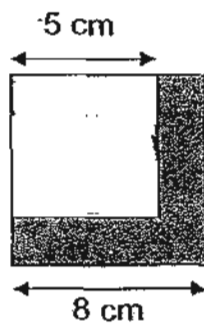
(Go to the next page)

5.  $1\frac{1}{3}$  of a number is 120. What is the number?

- (1) 30
- (2) 90
- (3) 120
- (4) 160

---

6. The figure below is made up of 2 different squares. Calculate the perimeter of the shaded part.



- (1) 12 cm
- (2) 20 cm
- (3) 32 cm
- (4) 39 cm

( )

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7. A piece of rope of length 2.04 m is cut into 30 smaller equal pieces. What is the length of each piece of the rope that has been cut?

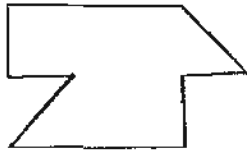
- (1) 0.806 m
- (2) 0.68 m
- (3) 0.608 m
- (4) 0.068 m

( )

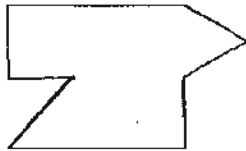
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8. Which of the following figures can be tessellated?

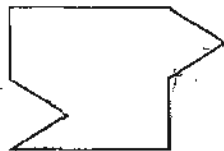
(1)



(2)



(3)



(4)



( )

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9. A watch costs \$52 after a 20% discount. What was the original price of the watch?

(1) \$60

(2) \$65

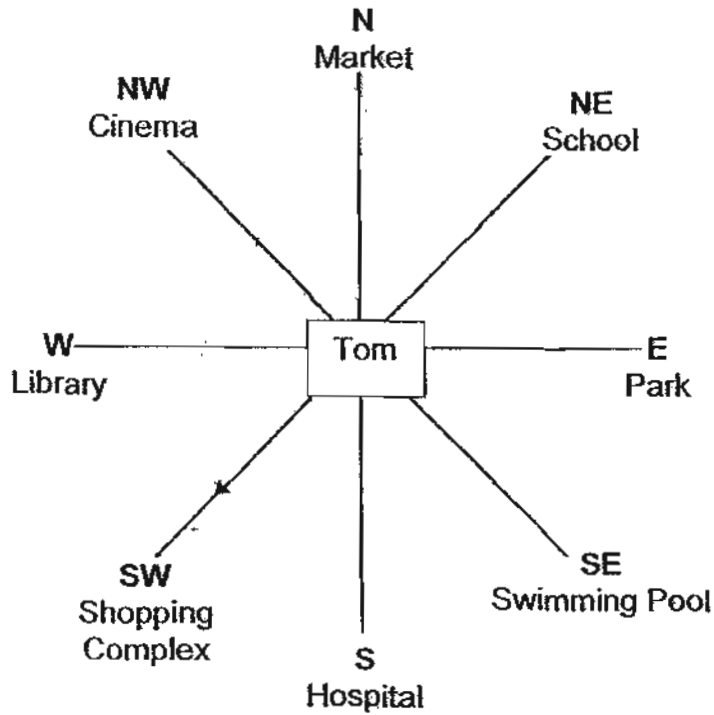
(3) \$78

(4) \$260

( )

(Go to the next page)

10.



Tom was facing the shopping complex after he made a  $225^\circ$  anti-clockwise turn. What was he facing before the turn?

- (1) Park
- (2) Market
- (3) Cinema
- (4) Swimming Pool ( )

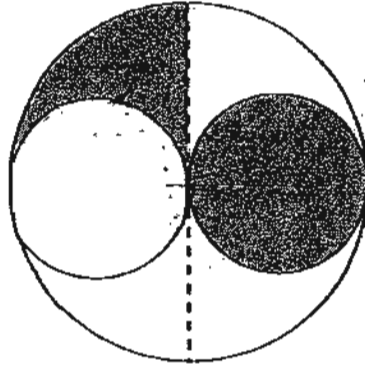
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11. Find the value of  $90 - 45 \div 5 + 10$ .

- (1) 3
- (2) 19
- (3) 71
- (4) 91 ( )

(Go to the next page)

12. The figure below is made up of 2 identical smaller circles and a big circle. The dotted line represents the diameter of the big circle. What fraction of the figure is shaded?



- (1)  $\frac{1}{4}$
- (2)  $\frac{3}{8}$
- (3)  $\frac{5}{8}$
- (4)  $\frac{1}{2}$  ( )

- 
13. A motorist takes 1 h 15 min to complete a journey. He drives at an average speed of 80 km/h. What would his traveling speed be if he were to travel the same journey in 50 min?

- (1) 20 km/h
- (2) 85 km/h
- (3) 100 km/h
- (4) 120 km/h ( )

(Go to the next page)

14. Palm trees are placed at equal distance away from one another on a straight row. If the distance between the 1<sup>st</sup> tree and the 5<sup>th</sup> tree is 20 m, find the distance between the 10<sup>th</sup> tree and the 30<sup>th</sup> tree.

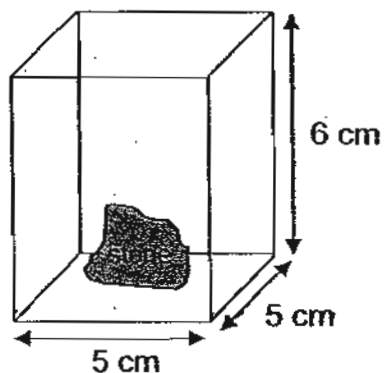
- (1) 76 m
- (2) 80 m
- (3) 95 m
- (4) 100 m

( )

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15. A square based tank of side 5 cm contains a stone of volume 40 cm<sup>3</sup>.

How much water must be poured into the tank so that it is  $\frac{1}{2}$  filled with water?



- (1) 35 cm<sup>3</sup>
- (2) 40 cm<sup>3</sup>
- (3) 75 cm<sup>3</sup>
- (4) 115 cm<sup>3</sup>

( )

(Go to the next page)

Name: \_\_\_\_\_ (       )

26 August 2010

Class: P 6 \_\_\_\_\_



**CATHOLIC HIGH SCHOOL**  
**PRIMARY SIX**  
**PRELIMINARY EXAMINATION 2**  
**MATHEMATICS**  
**PAPER 1**  
**(BOOKLET B)**

15 questions

20 marks

Total Time for Booklets A and B: 50 min

Booklet A	
Booklet B	
Total	

**INSTRUCTIONS TO CANDIDATES**

Do not turn over this page 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 **not** allowed to use a calculator.

Questions 16 to 25 carry 1 mark each. Write your answers in the space provided. For questions which require units, give your answers in the units stated. (10 marks)

Do not write  
in this space.

16. How many quarters are there in  $4\frac{1}{2}$ ?

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

17. A performance started at 11.30 a.m. and finished at 1.05 p.m. How long was the performance?

Ans: \_\_\_\_\_ h \_\_\_\_\_ min

18. Jenny has 6 kg of sugar. She packs them into 7 equal packets. Find the mass of each packet. Express your answer to the nearest 2 decimal places.

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

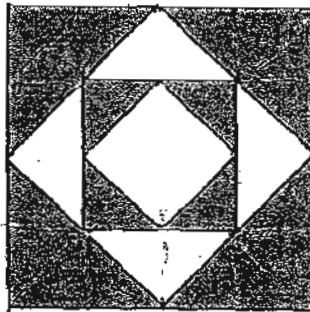
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19. What is  $\frac{1}{2}\%$  of \$2400?

Do not write  
in this space.

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

20. The figure below is made up of 4 squares of different sizes. What fraction of the figure is shaded?



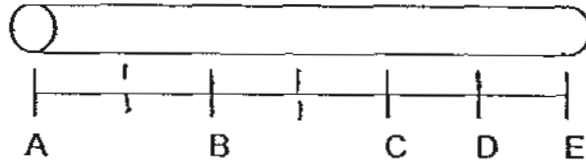
Ans: \_\_\_\_\_

21. Mrs Tan bought  $2\frac{1}{4}$  l of oil. She used  $\frac{3}{5}$  of it to prepare her dinner. How much oil had she left? Express your answer in terms of millilitres.

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

(Go to the next page)

22. The diagram below shows a rod of length 1.5 m marked with the following letters. Given that  $AB = BC = CE$  and D is the midpoint of C and E, find the distance BD, expressing your answer in terms of metres.



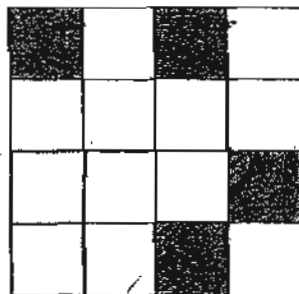
Ans: \_\_\_\_\_ m

Do not write  
in this space.

23. \$p was shared between Darren and Eric. If Darren had 80 cents more than Eric, how much did Eric have in terms of p?  
Express your answer in terms of dollars.

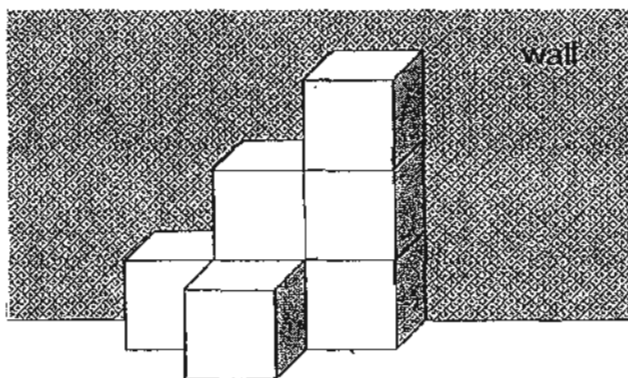
Ans: \$ \_\_\_\_\_

24. Shade 1 more square to make the figure symmetrical.




(Go to the next page)

25. The figure below shows a solid made up of 1 cm unit cubes. The solid is placed against a wall. How many cubes need to be added to the solid to form a 3 cm cube?



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

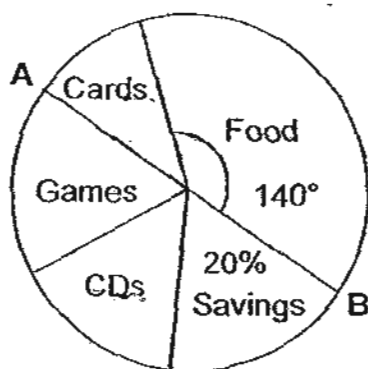
Total marks for questions 16 to 25

(Go to the next page)

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. Study the pie chart and answer question 26.  
The pie chart shows how John spends his monthly allowance. He spent an equal amount on games and CDs. The line  $AB$  is a straight line.



Given that he spent \$7 more on the CDs than on the cards, how much was his monthly allowance?

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

27. Mr Tan bought  $2\frac{1}{2}$  kg of sugar. He gave  $\frac{1}{4}$  of it to his sister and used  $\frac{1}{4}$  kg to bake some muffins. How much sugar had he left?

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

(Go to the next page)

28. An office lift can accommodate either 18 adults or 24 children. If there are already 15 adults in the lift, how many more children can the office lift accommodate?

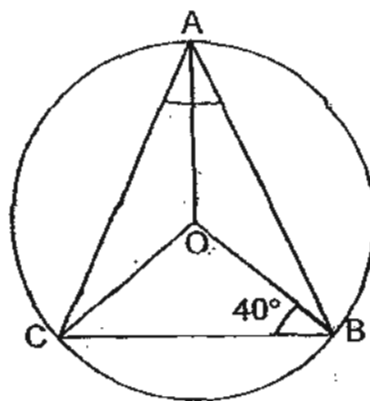
Do not write in this space.

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

29. A shop sells a bag at \$180. If the bag is sold at 90% of its usual selling price, the shop earns a profit of \$20. What is the cost price of the bag?

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

30. The figure below shows a circle with centre O. Given that  $AC = AB$  and  $\angle OBC = 40^\circ$ , find  $\angle CAB$ .



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

Total marks for questions 26 to 30  
End of Paper 1

(Go to the next page)

Name : \_\_\_\_\_ ( ) 26 August 2010

Class : P 6 \_\_\_\_\_



**CATHOLIC HIGH SCHOOL**  
**PRELIMINARY EXAMINATION 2**

**PRIMARY SIX**  
**MATHEMATICS**

**PAPER 2**

Total Time: 1 h 40 min

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

Paper 1 Booklet A	20
Paper 1 Booklet B	20
Paper 2	60
Total Marks	100

**INSTRUCTIONS TO CANDIDATES**

Do not turn over this page 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.

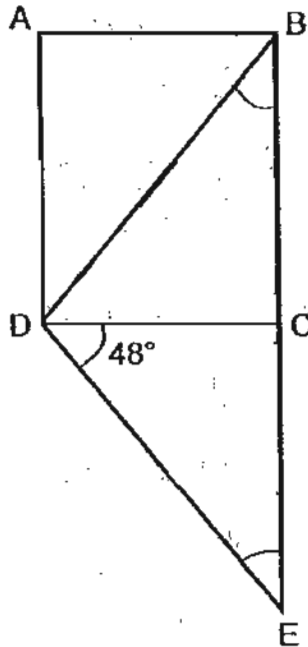
Write your answers in this booklet.

You are allowed to use a calculator.

Questions 1 to 5 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

1. ABCD is a rectangle. BD is equal to DE. Find  $\angle DBC$ .



Ans: \_\_\_\_\_ °

2. Timmy is  $n$  years old now. In 3 years time, his sister will be thrice his age. Express their total age in terms of  $n$ .

Ans: \_\_\_\_\_ years old

(Go to the next page)

3. A book and a pen cost \$3. An eraser and a book cost \$2.50. Find the total cost of a book, a pen and an eraser if a pen and an eraser cost \$1.50.

Do not write  
in this space.

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

4. At a sale, wet tissues are sold at \$1 per packet or 4 packets for \$3.50. What is the maximum number of packets you can buy for \$100?

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

5. During a basketball match, the teacher promised the team of 8 pupils an equal playing time during the 40 minutes match. Given that only 5 players can play at any one time, what is the average playing time for each pupil?

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

(Go to the next page)

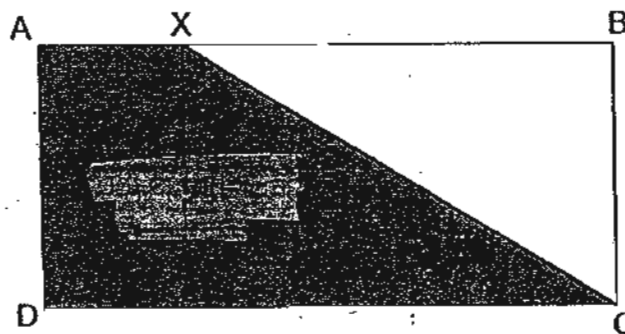
For questions 6 to 18, show your working clearly in the space provided for each question and write your answers in the spaces provided. The number of marks available is shown in the brackets [ ] at the end of each question or part-question. (50 marks)

Do not write in this space.

6. Jack, Betty and Lynn shared the cost of a present. Jack paid  $\frac{1}{3}$  of the total cost of the present. The amount paid by Betty and Lynn is in the ratio 1 : 3. If the cost of the present is \$30, how much did Betty pay?

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

7. ABCD is a rectangle. X is a point on AB.  $XB$  is  $\frac{3}{4}$  of AB. The area of AXCD is  $90 \text{ cm}^2$ . Find the area of XBC.

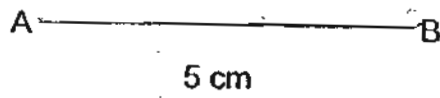


Ans: \_\_\_\_\_ [3]

(Go to the next page)

8. In the space below, draw a parallelogram ABCD in which  $\angle BCD$  is  $30^\circ$ .  
AB is 5 cm and BC is 8 cm. The line AB has been drawn for you.

Do not write  
in this space.

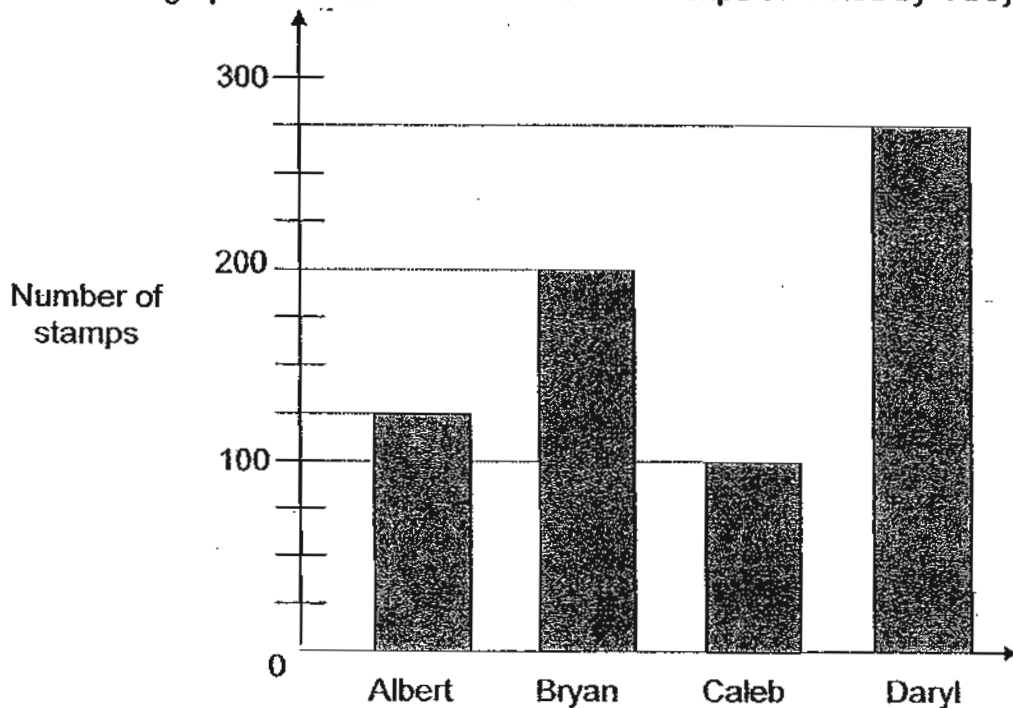


Ans: \_\_\_\_\_ [3]



(Go to the next page)

9. The graph below shows the number of stamps collected by 4 boys.



Do not write  
in this space.

- (a) What is the average number of stamps collected by each boy?

Ans: \_\_\_\_\_ [1]

- (b) How many stamps must Daryl give Albert so that both boys will get the same number of stamps?

Ans: \_\_\_\_\_ [2]

(Go to the next page)

10. At a factory, Jane could assemble 8 toys in a day while Mary could assemble 5 more toys than her in a day. If Mary was absent for 4 days, how many days would she need to assemble 18 more toys than Jane?

Do not write  
in this space.

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

(Go to the next page)

11. John had \$180 more than Raymond at first. Both bought a different printer with some of their money. In the end, Raymond was left with \$20 more than John. If John's printer cost 50% more than Raymond's printer, how much does John's printer cost?

Do not write  
in this space.

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



(Go to the next page)

12. The following figures are made up of dots. Look at the figures below and answer the following questions.

Do not write in this space.

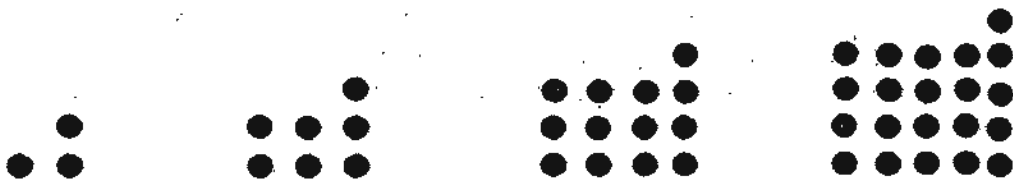


Figure 1

Figure 2

Figure 3

Figure 4

Figure Number	1	2	3	4
Number of dots	3	7	13	21

a) How many dots are there in the Figure 50?

b) In which figure can 651 dots be found?

Ans: \_\_\_\_\_ [2]

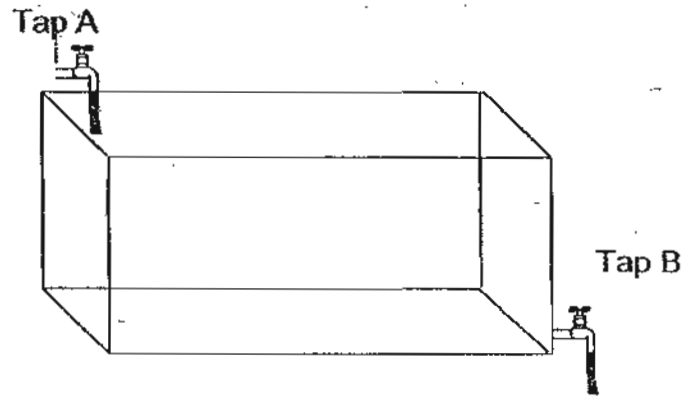
Ans: \_\_\_\_\_ [2]



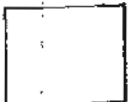
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13. An empty rectangular container measures 50 cm by 40 cm by 20 cm. Water from tap A flows into the container at a rate of 5 ℓ per minute while Tap B drains water from the container at 3 ℓ per minute. If both taps are turned on at the same time, how long does it take for the container to be completely filled with water?

Do not write  
in this space



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



(Go to the next page)

14. In the 2 classes 6A and 6B, the total number of girls was 100% more than the total number of boys. The ratio of boys to girls in 6A was 3:4 and the ratio of boys to girls in class 6B was 1:6. If there were 8 more girls in class 6A than class 6B, find the number of pupils in class 6A.

Do not write  
in this space

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

(Go to the next page)

15. At 9 a.m., John was cycling from Point A to Point B. At the same time, Mary was cycling from Point B to Point A using the same route as John. Cycling at a speed of 4 km/h faster than Mary, John would pass Mary 300m away from the midpoint.

(a) What time did they pass each other?

(b) If John took another 3 minutes to reach Town B, what time would Mary reach Town A?

Point A

Point B

Do not write  
in this space

Ans: \_\_\_\_\_ 3

Ans: \_\_\_\_\_ 2

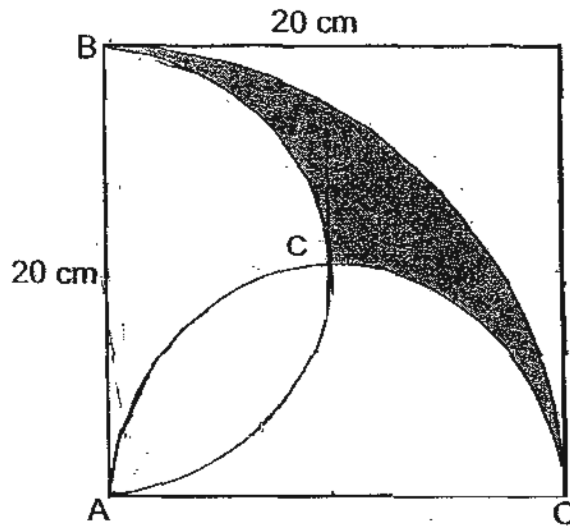


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16. OAB is a quadrant of radius 20 cm. OCA and ACB are semicircles.

- (a) Find the perimeter of the shaded part.
- (b) Find the area of the shaded part.

(Take  $\pi = 3.14$ )



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

Ans:(b) \_\_\_\_\_ [3]

(Go to the next page)

17. Daniel had 40% more stickers than Brandon. Daniel and Brandon each gave 20% of their stickers to Calvin. As a result, Calvin's stickers increased by 80%. If Daniel has 20 more stickers than Calvin in the end, how many stickers did Brandon have at first?

Do not write  
in this space

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

18. At a conference made up of speakers and participants, there were 20% more men than women. The ratio of male speakers to female speakers was 8:5. There was an equal number of male and female participants.

Do not write in this space.

- (a) Find the ratio of male speakers to male participants at the conference.
- (b) Halfway, 40 male participants left the conference and another 60 female participants joined the conference. In the end, there were  $\frac{3}{4}$  as many male participants as female participants remaining behind. How many speakers were there at the conference?

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

Ans:(b) \_\_\_\_\_ [3]

End of paper.

(Go to the next page)

# ANSWER SHEET

**EXAM PAPER 2010**

**SCHOOL : CATHOLIC HIGH PRIMARY**  
**SUBJECT : PRIMARY 6 MATHEMATICS**

**TERM : PERLIMINARY**

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

16)18      17)1h 35min      18)0.86kg      19)\$12      20)5/8

21)900ml      22)0.75m      23) $\$(\frac{p - 0.80}{2})$       24)




25)20 cube      26)\$180      27)15/8

28)4 children      29)\$142      30)50°

**Paper 2**

<p>1) <math>\angle DEC \rightarrow 180^\circ - 48^\circ - 90^\circ = 42^\circ</math>  <math>\angle DBC \rightarrow 42^\circ</math></p>	<p>2) <math>(4n + 6)</math></p>
<p>3) \$3.50</p>	<p>4) 114 packets</p>
<p>5) 25 mins</p>	<p>6) \$5</p>
<p>7) 54cm<sup>2</sup></p>	<p>8)</p> <p style="text-align: center;"><math>(360^\circ - 30^\circ - 30^\circ) \div 2 = 150^\circ</math></p>

<p>9)a)175 b)75</p>	<p>10)10 days</p>
<p>11)\$600</p>	<p>12)a) <math>1 + 50 \times 51 = 2551</math> b) <math>651 - 1 = 650</math> <math>25 \times 26 = 650</math> Figure no. 25</p>
<p>13)Volume of  <math>50 \times 40 \times 20</math> = <math>40000\text{cm}^3</math> <math>40000\text{cm}^3 = 40000\text{ml} = 40\text{Z}</math> 1 min <math>\rightarrow 5\text{L} - 3\text{L} = 2\text{L}</math> <math>2\text{L} = 2000\text{ml} = 2000\text{cm}^3</math></p> <p><math>\times 20 \left\{ \begin{array}{l} 1 \text{ min} \rightarrow 2000\text{cm}^3 \\ 20 \text{ mins} \rightarrow 40000\text{cm}^3 \end{array} \right\} \times 20</math></p> <p>Ans: 20 mins</p>	<p>14)56</p>
<p>15)a)9.09 am b)9.35 am</p>	<p>16)a)62.8cm b)57cm<sup>2</sup></p>
<p>17)500</p>	<p>18)a)4:5 b)442</p>