CATHOLIC HIGH SCHOOL

PRELIMINARY EXAMINATION 2 2014

MATHEMATICS

PRIMARY 6

PAPER 1

(BOOKLET A)

Name :_____

Class: Primary 6 _____

Date: 21 August 2014

Total Time for Booklets A and B: 50 min

15 questions

20 marks

INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

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

The use of calculators is **NOT** allowed.

Booklet A and B consist of 12 printed pages.

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. All diagrams are not drawn to scale. (20 marks)

1. 50 653 people took part in a marathon. Express this number to the nearest hundred.

    (1) 50 000

    (2) 50 600

    (3) 50 700

    (4) 51 000

2. Which one of the following is the same as 3080 ml?

    (1) 3 ℓ 8 ml

    (2) 3 ℓ 80 ml

    (3) 30 ℓ 8 ml

    (4) 30 ℓ 80 ml
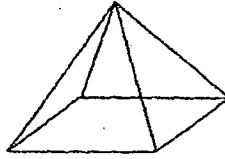
3. 450.1 ÷ 300 is the same as _____.

    (1) 450.1 ÷ 3 ÷ 100

    (2) 450.1 ÷ 3 × 100

    (3) 450.1 ÷ 100 × 3

    (4) 450.1 ÷ 10 × 30

4. Arrange the following numbers from the smallest to the largest.
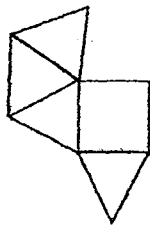
    7, 7.2, 7.02

    (1) 7 , 7.2 , 7.02

    (2) 7 , 7.02 , 7.2

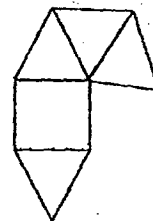   (3) 7.2 , 7.02 , 7

    (4) 7.02 , 7 , 7.2
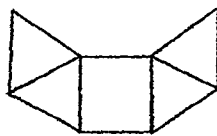
5. The figure below shows a pyramid.

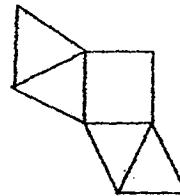Which one of the following is a net of the pyramid?

(1)

(2)

(3)

(4)

6. A basket contains some apples and oranges. There are $\frac{2}{5}$ as many oranges as apples in a basket. What fraction of the fruits in the basket is apples?
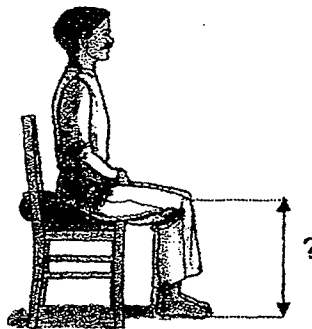
(1) $\frac{2}{7}$

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

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

(4) $\frac{5}{7}$

7. Emily uses 2 eggs to make 18 cupcakes. How many eggs does she use to make 117 cupcakes?

    (1)   13

    (2)   10

    (3)   9

    (4)   6

8. Mr Rajah sits on a chair with his feet touching the floor. Which one of the following could be the possible height measured vertically from the floor to his knees?
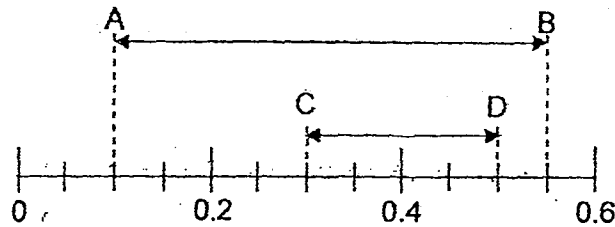

    (1)   5000 cm

    (2)   500 cm

    (3)   50 cm

    (4)   5 cm

9. Find the value of $\frac{3w}{2} - w + 4$ when w = 36.

    (1)   14

    (2)   18

    (3)   22

    (4)   76
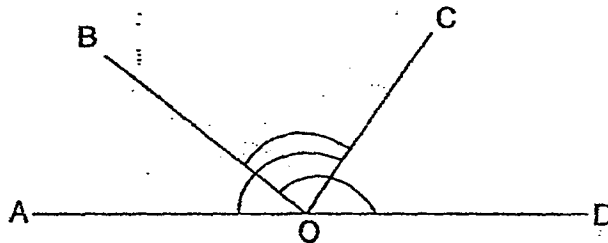
10. In the number line below, how much longer is AB than CD?

(1) 0.25

(2) 0.30

(3) 0.40

(4) 0.55

---

11. What percentage of 1 litre is 50 cm³?

(1) 5%

(2) 2%

(3) 20%

(4) 50%

---

12. In the figure, AOD is a straight line. ∠AOC = 125° and ∠BOD = 142°. What is ∠BOC?

(1) 17°

(2) 38°

(3) 55°

(4) 87°

---

13. Aden and Brandon were standing in a queue to board a bus. Aden was in the middle of the queue. Brandon was 19th in the queue and behind Aden. There were 6 people between them. How many people were standing in the queue to board the bus?

    (1)   23
    (2)   24
    (3)   25
    (4)   26

14. Jerina bought an equal number of vanilla and chocolate ice-creams for a party. $\frac{2}{5}$ of the vanilla ice-creams and $\frac{1}{3}$ of the chocolate ice-creams were left at the end of the party. What fraction of the total number of ice-creams was eaten?

    (1) $\frac{11}{30}$

    (2) $\frac{19}{30}$

    (3) $\frac{11}{15}$

    (4) $\frac{19}{15}$

15. The usual price of a racket in a shop was $218. Jon bought a racket at a discount with 7% GST on the discounted price. How much was the discount if he paid $214 for the racket?

    (1) $14.98
    (2) $19.26
    (3) $18
    (4) $4

END OF BOOKLET A

CATHOLIC HIGH SCHOOL

PRELIMINARY EXAMINATION 2 2014

MATHEMATICS

PRIMARY 6

PAPER 1

(BOOKLET B)

Name _____

Class: Primary 6 _____

Date: 21 August 2014

Total Time for Booklets A and B: 50 min

15 questions

20 marks

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.

Write your answers in this booklet.

The use of calculators is **NOT** allowed.

Booklet A and B consist of 12 printed pages.

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. Write 1 million, 4 hundred and nine thousand and five in figures.

Ans: _____

17. Express 0.75 as a percentage.

Ans: _____

18. Find the value of 2.58×19.

Ans: _____

6

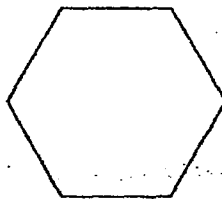19. List all the common factors of 16 and 24.

Ans:_____

20. What is the missing number in the box below?

$39 \times 7 + 11 \times 7 = \boxed{} \times 14$

Ans: _____

21. The figure below is one of the faces of a prism. How many faces does the prism have?
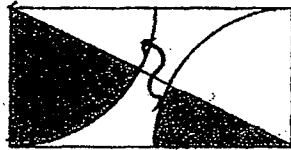

Ans: _____

22. Alston spent $2\frac{2}{9}$ h to watch TV and play computer game. He used $\frac{1}{3}$ h to watch TV. How much time did he spend playing computer game? Give your answer in the simplest form.

Ans:_____ h

23. The figure is made up of a rectangle and two quarter circles. The breadth of the rectangle is 10 cm. What is the total area of the shaded parts? Give your answer in terms of π.
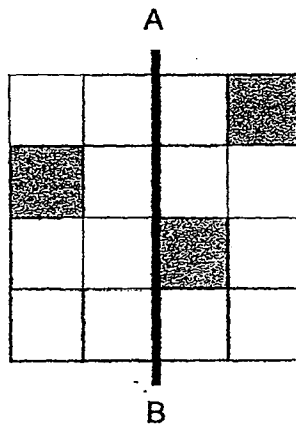

Ans:_____ cm^2

8

24. Mrs Chew bought 120 kg of flour. She repacked the flour into bags of $\frac{3}{8}$ kg each with no left over. How many bags of flour did she have?

Ans:_____

25. The figure below is made up of squares.
Shade 3 more squares so that AB is the line of symmetry of the figure.

A

B

Total marks for questions 16 to 25

9

(Go on to the next page)

Questions 26 to 30 carry 2 marks each. Show your working and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. (10 marks)
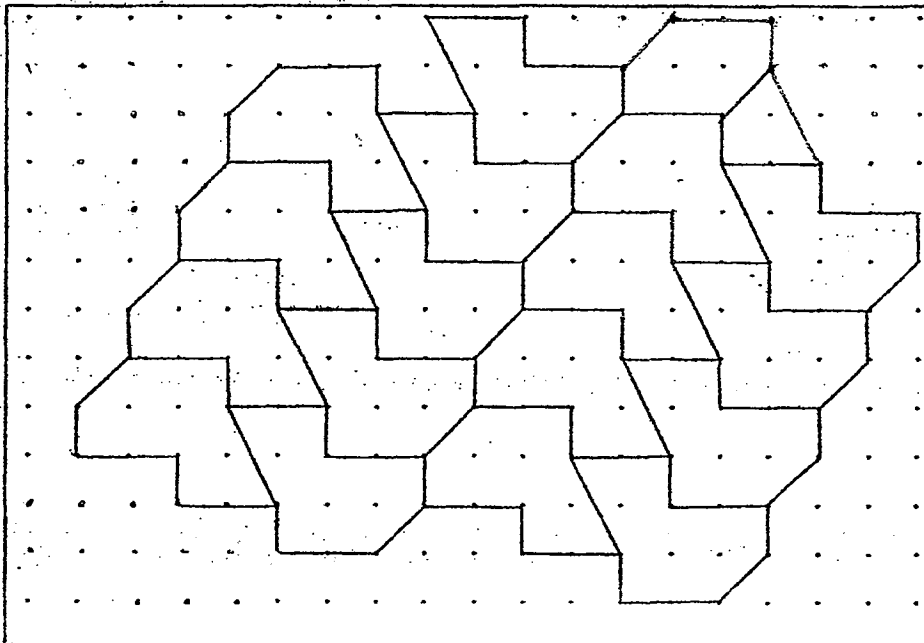
Do not write in this space.

26. For every purchase of two movie tickets, the third ticket is free. A movie ticket is priced at $10. George needs 8 movie tickets. How much does he need to pay for the tickets?

Ans: $_____

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

(Go on to the next page)

28. Raphael bought a packet of sweets. He divided the sweets into 5 equal portions. He gave 1 portion and 9 more sweets to his younger brother. He was left with 23 sweets. How many sweets were there in the packet at first?

Ans: _____

29. There are some theatres in a cinema complex. The average number of seats in a theatre is 224. 40 seats are removed and the average number of seats in a theatre becomes 219. How many theatres are there in the cinema complex?

Ans: _____

30. In the figure below, ABC is a triangle. Lines AF and DE are drawn
   perpendicular to CB. CF = FE = EB. The area of triangle DBE is
   13.7 cm^2 and is half the area of triangle AFC.
   What is the area of the triangle ABC?
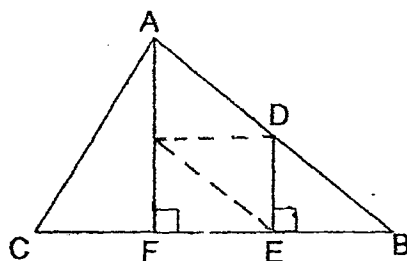
Ans:_____ cm^2

Total marks for questions 26 to 30

END OF BOOKLET B
END OF PAPER 1

12

CATHOLIC HIGH SCHOOL
PRELIMINARY EXAMINATION 2 2014
MATHEMATICS
PRIMARY 6
PAPER 2

Name : _____(   )

Class: Primary 6 _____

Date: 21 August 2014

Total Time: 1 h 40 min

Parent's Signature: _____

INSTRUCTIONS TO CANDIDATES

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

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Write your answers in this booklet.

The use of an approved calculator is expected, where appropriate.

This booklet consists of 16 printed pages.

Questions **1** to **5** carry 2 marks each. Show your working clearly and write your answers in the spaces provided. For questions which require units, give your answers in the units stated. All diagrams are not drawn to scale.   (10 marks)

1.   A string y cm long is cut into two pieces. One piece is 5 cm longer than the other. What is the length of the longer piece?
Give your answer in terms of y.

Ans: _____ cm

2.   In the diagram below, the letters M, A, T, H and S are drawn on a square grid.   List all the letters which have both perpendicular and parallel lines.
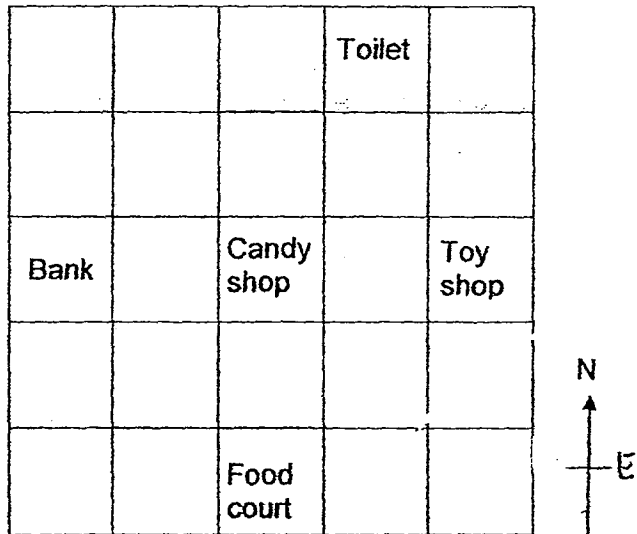

Ans:_____

(Go on to the next page)

1
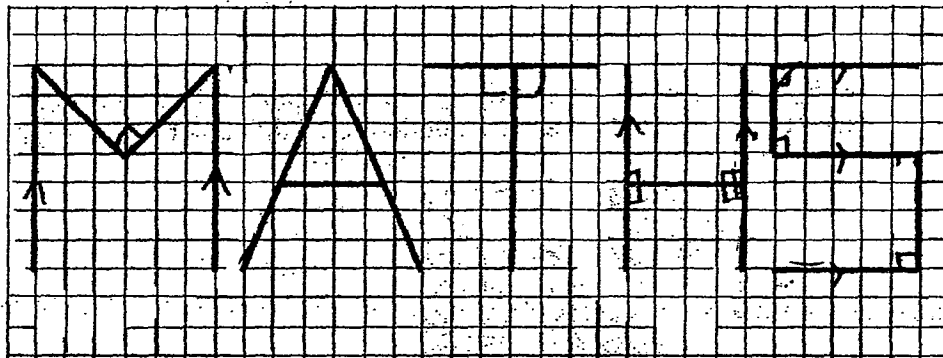
3. The square grid below shows the plan inside a shopping centre.
   The candy shop is north of the food court.

			Toilet	
Bank		Candy shop		Toy shop
		Food court		

N
↑
—— E

(a) In which direction is the candy shop from the bank?

(b) Mr Tan is setting up a sports shop.
   The location of the sports shop is to be south-east of the candy shop and north-east of the food court.
   Put a tick (√) in the square where the sports shop will be located.

Ans: (a) _____

---

4. The figure shows a rectangular glass tank partly filled with unit cubes. How many more unit cubes are needed to fill the tank completely?

Ans: _____

(Go on to the next page)

2

5. Jeremy arranged 5 letters to form a pattern. The first 4 rows are as shown below.

|		
Row 1	AB	CDE
Row 2	BA	ECD
Row 3	AB	DEC
Row 4	BA	CDE

. . .

Write the arrangement of the 5 letters in Row 83.

Ans: _____

3

For questions **6** to **18**, show your working 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. All diagrams are not drawn to scale.

(50 marks)

6. The line graph below shows the number of books sold by a shop from July to December in 2013.
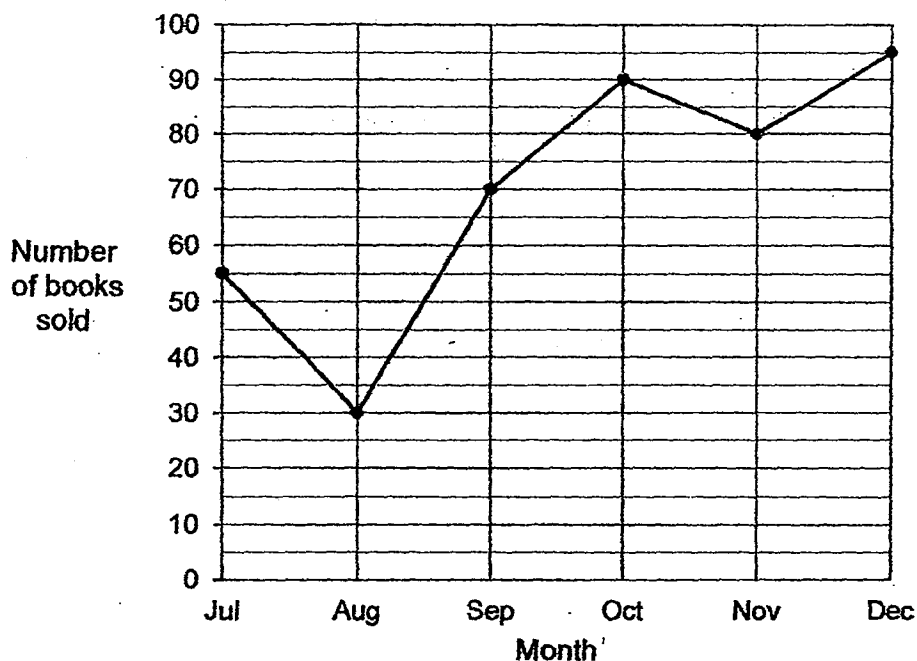
(a) What was the average number of books sold per month from July to December in 2013?

(b) The total number of books sold for the same period from July to December in 2012 was 672. Find the percentage decrease in the total number of books sold for the same period from 2012 to 2013.
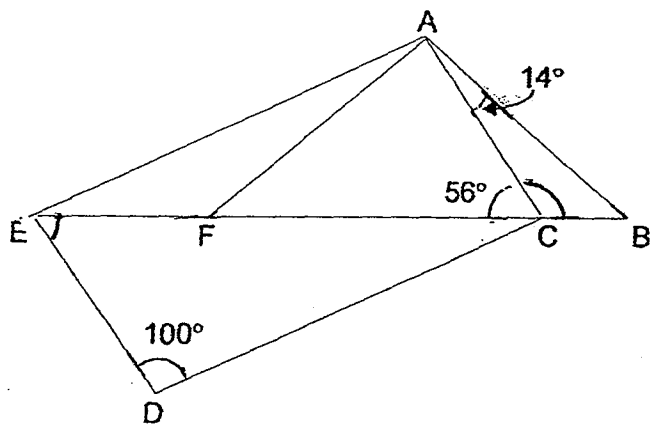
Ans:(a) _____ [1]

(b) _____ [2]

1

(Go on to the next page)

4

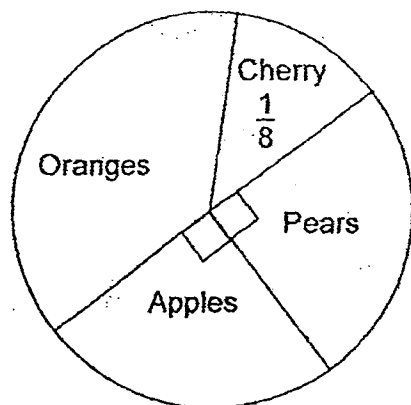7.	In the figure below, ACDE is a parallelogram and ABF is an isosceles triangle. EFCB is a straight line. ∠CDE = 100°, ∠ACF = 56° and ∠CAB = 14°. Find ∠EAF.

Ans: _____[3]
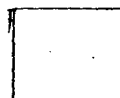
5

8. The pie chart represents the number of fruits sold at a fruit stall. 650 apples were sold. How many oranges were sold?

Ans: _____[3]

6

9. When Jane started folding paper crane, Rose had already folded 80 paper cranes. For every 7 paper cranes that Jane folded, Rose folded 5 paper cranes. How many paper cranes would Jane have folded when both girls had the same number of paper cranes?
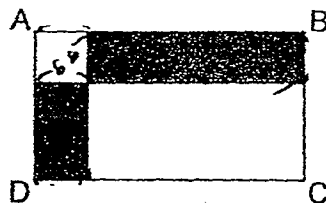
Ans: _____ [3]

7

10. Rectangle ABCD is made up of an unshaded square, an unshaded rectangle and two shaded rectangles. The area of the square is 36 cm^2 and the perimeter of the unshaded rectangle is 76 cm. What is the total area of the 2 shaded rectangles?

[3]

8

11. Ivan needs balloons for a carnival. The balloons are sold in packets of 80 only. Each packet is sold at $2.50. Ivan has the exact amount of money to buy $\frac{4}{5}$ of the required number of packets of balloons. When his mother gives him another $15, he is able to buy the required number of packets of balloons. How many balloons does Ivan need?

Ans:_____[4]

12. Ivan cycled from the school to the library at 80 m/min. His sister cycled from the library to the school at 65 m/min. Both of them started cycling towards each other at the same time and did not change their speeds throughout their journey. When Ivan reached the library, his sister was 480 m from the school. What was the distance between the school and the library?

Ans: _____[4]

(Go on to the next page)
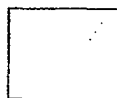
13. Douglas had some stamps. He sold $\frac{2}{7}$ of the stamps and then gave 162 stamps to his best friend. He was left with $\frac{1}{5}$ of the stamps he had at first. How many stamps did Douglas have at first?
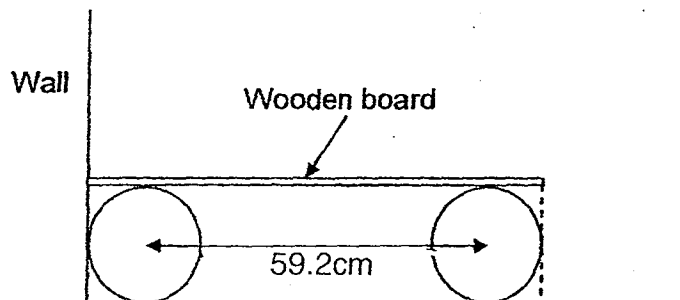
Ans: _____ [4]

11

14. Danny built a skateboard using two identical wheels of radius 2.9 cm each and a wooden board as shown below. The distance between the centres of the two wheels is 59.2 cm. He rolled the skateboard from one end of the room to the other end touching the walls at both ends. The distance between the two walls is 11.2 m. How many complete revolutions did each wheel make?
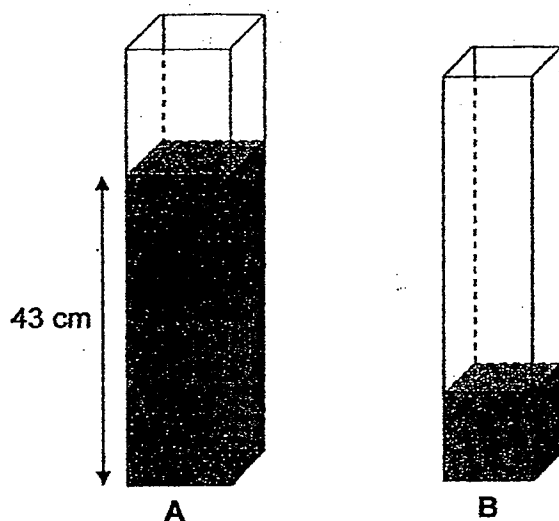
Take $\pi = 3.14$.

Ans:_____ [4]
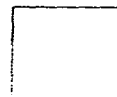
15. A and B are two rectangular containers. The base area of A is 50 cm^2 while the base area of B is 40 cm^2. Container A and B contained some water and the height of the water level in Container A was 43 cm as shown below.

43 cm

A   B

Douglas then poured some water from Container A into Container B. After that, the height of the water level in both containers became 30 cm. What was the height of the water level in Container B at first?

Ans:_____ [4]

(Go on to the next page)

16. Frank and Benjamin each bought some sheets of paper from a bookstore. If Frank used 40 sheets of paper each day and Benjamin used 80 sheets of paper each day, Frank would have 500 sheets of paper left when Benjamin used up all his papers.
If Frank used 80 sheets of paper each day and Benjamin used 40 sheets of paper each day, Frank would have 20 sheets of paper left when Benjamin used up all his papers.
How many sheets of paper did Frank and Benjamin buy altogether?

Ans: _____ [5]

14

17. At a sale, Mr Chua bought an electric kettle and a fan at a discount. He paid a total of $105 for these two items. The amount paid for the electric kettle is $\frac{2}{3}$ as much as that for the fan.

(a) How much did he pay for the fan?

(b) The total price of these two items before discount was $127.50. Mr Chua was given a discount of 20% on the electric kettle. What was the percentage discount given for the fan?
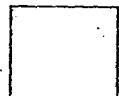
Ans: (a) _____ [2]

(b) _____ [3]

18. The price of a child ticket and an adult ticket to a concert are $3 and $8 respectively. The amount collected from the sale of the child tickets is $730 less than the amount from the sale of the adult tickets. The number of child tickets sold is 35 fewer than the number of adult tickets sold. How many tickets are sold altogether?

Ans:_____[5]

END OF PAPER.
PLEASE CHECK YOUR WORK CAREFULLY.

EXAM PAPER 2014
SCHOOL : CATHOLIC HIGH
PRIMARY : P6
SUBJECT : MATHEMATICS
TERM   : PRELIMINARY 2

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

16)1409005   17)75%   18)49.02   19)1,2,4,8   20)25

21)8   22)1$\frac{8}{9}$ h   23)25Π 24)320   25)
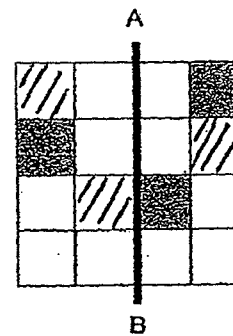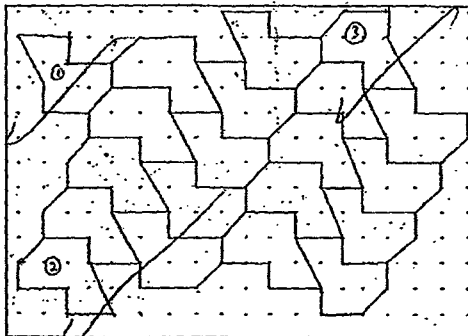
26)$60   27)

28)40

29)8

30)82.2 cm2

Paper 2
1)$\frac{(y-5)}{2}$

2)M,H,S

3)East

4)4 x 3 x 3 = 36
   36 − 13 = 23

5)Row 5 AB   ECD
  Row 6 BA   DEC
  Row 7 AB   CDE
 1 set = 6 Rows
 83÷6 = 13 R 5
ANS : ABECD

6)a)55+30+70+90+80+95 = 420
   420÷6 = 70
 b)672 − 420 = 252
   $\frac{252}{672}$ x 100% = 37.5%

7)56° − 14° = 42°
 180° − 42° − 42° − 14° = 82°
 100° − 82° = 18°

8)2u = 650
 3u = $\frac{650}{2}$ x 3 = 975

9)7 − 5 = 2
 80÷2 = 40
 40 x 7 = 280

10)76÷2 = 38
  $\sqrt{36}$ = 6
  38 x 6 = 228 cm2

11)1u = $15
  5u = 15 x 5 = 75
  75÷2.5 = 30
  30 x 80 = 2400

12)80 − 65 = 15
  480÷15 = 32
  80 x 32 = 2560 m

13)$\frac{2}{7}$ = $\frac{10}{35}$
  $\frac{1}{5}$ = $\frac{7}{35}$
  35 − 10 − 7 = 18
  18u = 162
  35u = $\frac{162}{18}$ x 35
    = 315

14) $1120 - 29 - 59.2 - 2.9 = 1055$
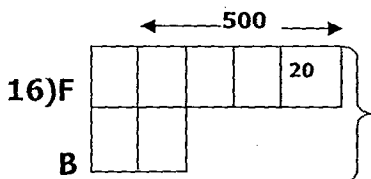
$3.14 \times 5.8 = 18.212$

$1055 \div 18.212 = 57.9$

Ans: 57 complete revolutions

15) $43 - 30 = 13$

$50 \times 13 = 650$

$650 \div 40 = 16.25$

$30 - 16.25 = 13.75$ cm

16)

$3u = 500 - 20 = 480$

$6u = 480 \times 2 = 960$

$960 + 20 = 980$

17) a) $5u = 105$

$1u = 105 \div 5 = 21$

$3u = 3 \times 21 = \$63$

b) $2u = 2 \times 21 = 42$

$80\% = 42$

$100\% = \dfrac{42}{80} \times 100 = 52.50$

$127.50 - 52.50 = 75$

$75 - 63 = 12$

$\dfrac{12}{75} \times 100 = 16\%$

18) $35 \times 8 = 280$

$730 - 280 = 450$

$8 - 3 = 5$

$450 \div 5 = 90$

$90 + 90 + 35 = 215$