HENRY PARK PRIMARY SCHOOL
2010 PRELIMINARY EXAMINATION
MATHEMATICS
PRIMARY 6

PAPER 1
(BOOKLET A)

Name: _____ ( )

Class: Primary 6_____

Total Time for Booklets A and B: 50 min

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.

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)

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1. 7 hundreds, 3 tenths and 6 hundredths is _____.

   (1) 700.306
   (2) 700.360
   (3) 730.006
   (4) 730.060 ( )

2. Cindy's mass is 45 kg. Wendy's mass is 15 kg more than Cindy. Express Wendy's mass as a fraction of their total mass.

   (1) $\frac{1}{4}$

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

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

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

3. Which of the following is the same as 6070 ml?

   (1) 6 ℓ 7 ml
   (2) 6 ℓ 70 ml
   (3) 60 ℓ 7 ml
   (4) 60 ℓ 70 ml ( )

4. A piece of wire is bent to form a square of side 3 cm. The same piece of wire is then bent to form an equilateral triangle. What is the length of each side of the triangle?

(1) 12 cm
(2) 9 cm
(3) 3 cm
(4) 4 cm

( )

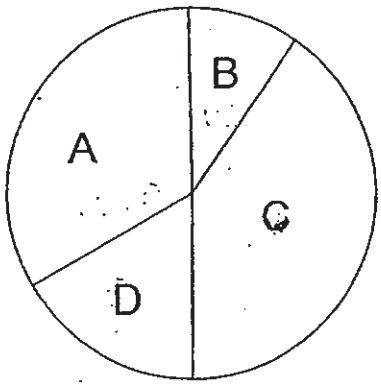
5. The average of 9 whole numbers is 9. If the average of 8 of these numbers is 8, what is the 9^{th} number?

(1) 8
(2) 9
(3) 17
(4) 64

( )

6. A survey was carried out to find the favourite colour of pupils in class 6A. A pie chart was drawn to represent the results of the survey, based on the table shown.

Favourite Colour	Fraction of pupils
red	$\frac{1}{10}$
blue	$\frac{2}{5}$
green	$\frac{1}{6}$
yellow	$\frac{1}{3}$

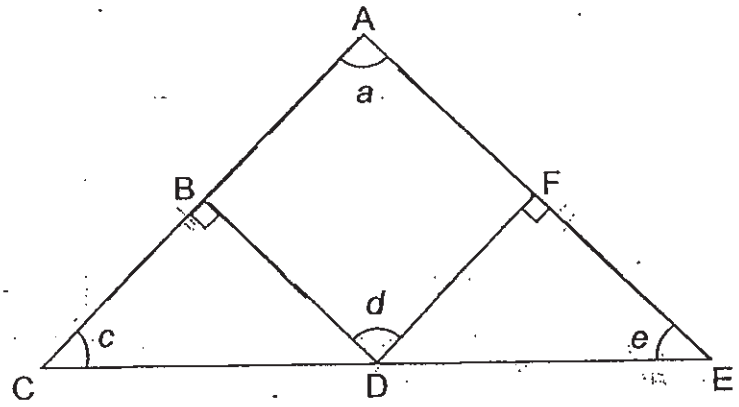


Which of the following represents the number of pupils whose favourite colour is yellow?

(1) A
(2) B
(3) C
(4) D

( )

7. In the diagram below, triangle ACE is formed by two isosceles triangles and a rhombus, and BC = BD = FD = FE.

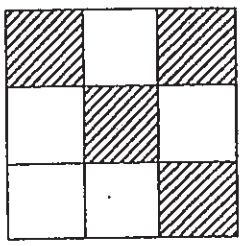


Which of the following statements is correct?

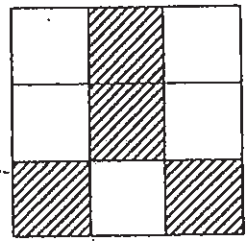
(1) $\angle a = \angle c$
(2) $\angle d = \angle e$
(3) $\angle a = \angle c + \angle e$
(4) $\angle d = 90^\circ - \angle e$

( )

8. Which of the following figures does not have a line of symmetry?



(1)



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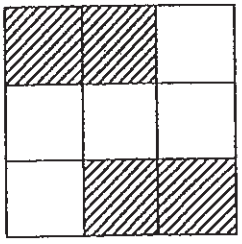
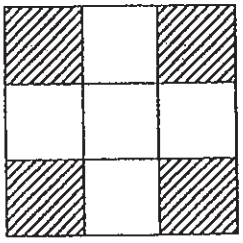


(3)



(4)

( )

9. The number of members in a club increased from 800 to 1000 over a year. What was the percentage increase in the number of members for this period?

(1) 20%
(2) 25%
(3) 80%
(4) 125% ( )

10. Simplify $6r + 5 - 2r + 3$.

(1) $4r + 2$
(2) $4r + 8$
(3) $8r + 2$
(4) $8r + 8$ ( )

11. Which of the following has the largest value?

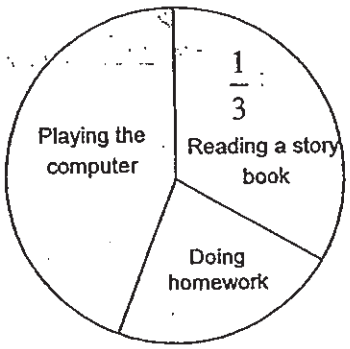
(1) $\frac{3}{8} \div \frac{3}{5}$

(2) $\frac{3}{5} \div \frac{8}{3}$

(3) $\frac{2}{3} \times \frac{3}{8}$

(4) $\frac{5}{8} \times \frac{3}{5}$ ( )

12. The pie chart below shows how Nick spent his time on Youth Day holiday from 1 p.m. to 7 p.m. He spent twice as much time playing the computer as doing his homework. How much time did he spend playing computer games?



(1) 80 min
(2) 120 min
(3) 160 min
(4) 240 min

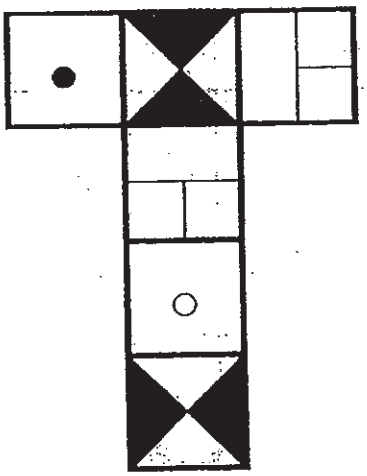
( )

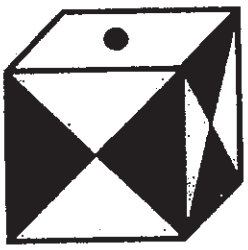
13. Kumar spent $\frac{4}{5}$ of his pocket money to buy 8 sheets of stickers. He wanted to buy another 8 sheets of such stickers but found that he was short of $12. What was the price of 1 sheet of stickers?

(1) $0.50
(2) $1.20
(3) $1.50
(4) $2.00

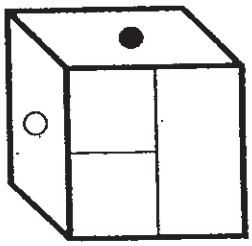
( )

14. Which of the following is definitely **not** the cube of the net shown below?

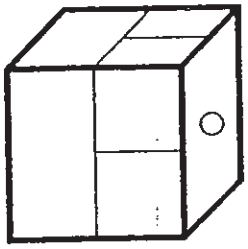




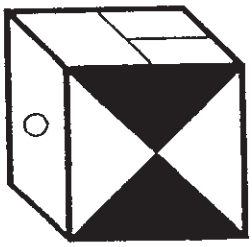
(1)



(2)



(3)



(4)

( )

15. 5 speed cameras were positioned at a distance of 50 km apart from each other along a highway. The table shows the time when a car travelling the highway was photographed by each camera.

Speed Camera	Time
1	08 45
2	09 10
3	09 50
4	10 20
5	10 55

Between which safety cameras did the car travel at an average speed of **more** than 100 km/h?

(1) 1 and 2
(2) 2 and 3
(3) 3 and 4
(4) 4 and 5 ( )

HENRY PARK PRIMARY SCHOOL
2010 PRELIMINARY EXAMINATION
MATHEMATICS
PRIMARY 6

PAPER 1
(BOOKLET B)

Name: _____ ( )

Class: Primary 6_____

Total Time for Booklets A and B: 50 min

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.

You are **not** allowed to use a calculator.

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. Arrange the following in descending order.

    7.399, 10.1, 1.998, 7.62

    Ans: _____, _____, _____, _____

17. A whole number when rounded off to the nearest thousand is 971 000. What is the largest possible whole number?

    Ans: _____

18. Express $1\frac{2}{5}$ h in minutes.

Ans: _____ min

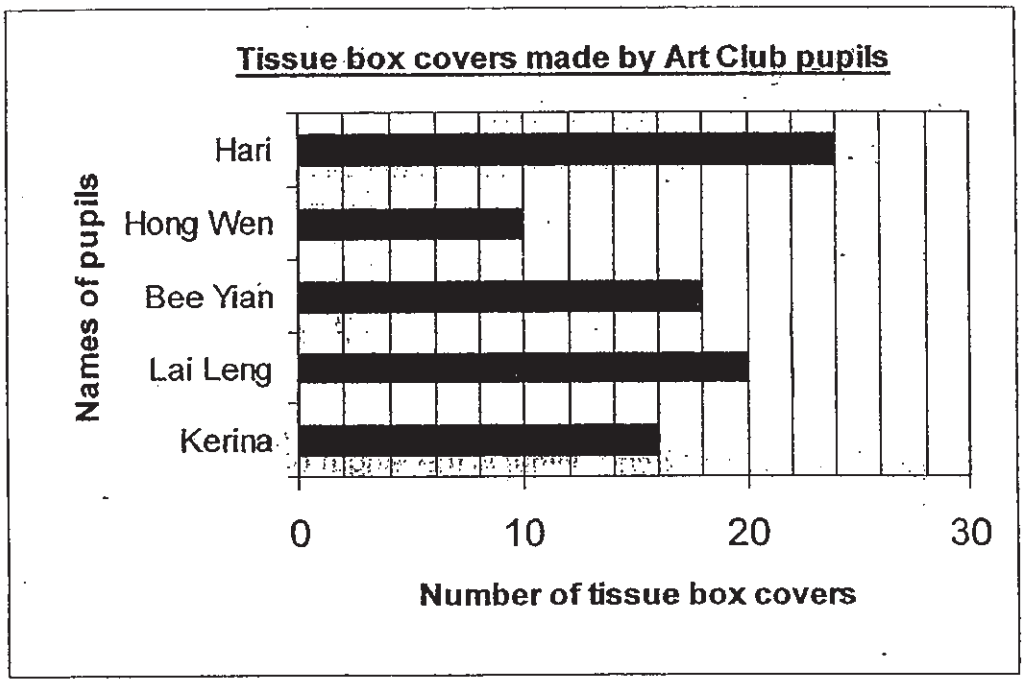
19. The volume of a cube is 512 cm^3. What is the length of this cube?

Ans: _____ cm

20. Find the perimeter of a quarter circle with radius 14 cm. (Take $\pi = \frac{22}{7}$)

Ans: _____ cm

The bar graph shows the total number of tissue box covers made by each pupil in a Art Club. Study the graph and answer questions 21 and 22.



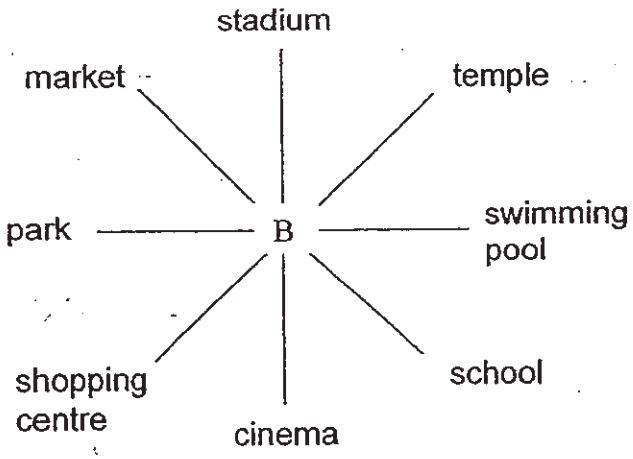
21. Who made twice as many tissue box covers as Hong Wen?

Ans: _____

22. What was the average number of tissue box covers made by each pupil? Round off the answer to the nearest whole number.

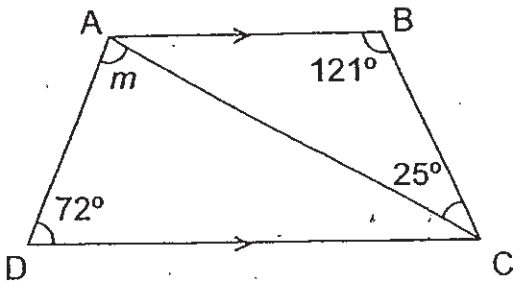
Ans: _____

23. In the diagram below, Ben is standing at point B facing the school. How many degrees does he need to turn anti-clockwise if he wants to face the park?



Ans: _____ °

24. In the figure below, AB // DC. Find $\angle m$.



Ans: _____

25. There are 150 light bulbs in a box. If 30 of them are defective, find the percentage of the bulbs that are in good condition.

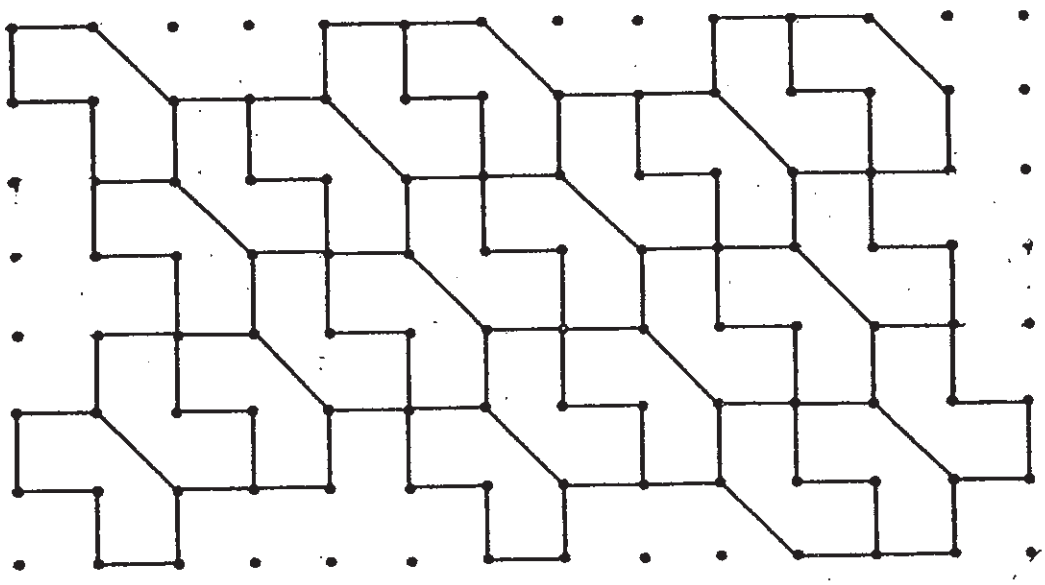
Ans: _____ %

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. Find the sum of all the common multiples of 4 and 6 that are less than 30.

Ans: _____

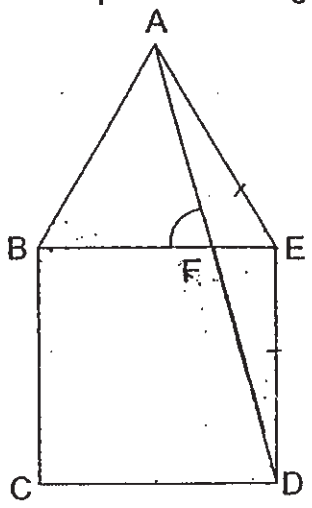
27. Extend the tessellation by drawing another **2 more** unit shapes in the space provided.



28. When $\frac{1}{3}$ of a number is divided by 5, the answer is 9.
What is the number?

Ans: _____

29. In the figure below, ABE is an equilateral triangle and BCDE is a square.
Find ∠BFA.



Ans: _____ °

30. A drink stall sold 3 kinds of bottled juices. Each bottle of coconut juice cost $3, each bottle of sugar cane juice cost $2 and each bottle of guava juice cost $1. If the number of bottled juices sold over three days was in the ratio of 3 : 6 : 11 respectively, find the average cost of each bottle sold during these three days.

Ans: $ _____

END OF PAPER

Setters: Mr Lim Ming Liang
Ms Theresa Heng

HENRY PARK PRIMARY SCHOOL
2010 PRELIMINARY EXAMINATION
MATHEMATICS
PRIMARY 6

PAPER 2

Name: _____( )

Class: Primary 6 _____

Time for Paper 2: 1 h 40 min

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 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)

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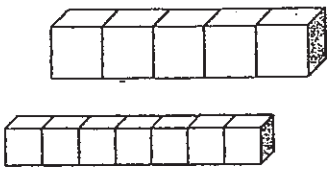
1. Siti made a row of 7 identical small cubes and a row of 5 identical big cubes as shown. The two rows are of the same length.



The length of one big cube is 6 cm longer than the length of one small cube. What is the length of each row of cubes?

Ans: _____ cm

2. Faizal scored an average of 72 marks for his two Math tests. If he wanted to increase his average mark by 3, how many marks should he score for his next Math test?

Ans: _____

3. At present, James is 24 years old and he is twice as old as his cousin. How old was James when he was 3 times as old as his cousin?

Ans: _____ years

4. The table shows the parking rate at a car park.

Time	Charges
8 am to 5 pm	$1.50 for first 2 hours $1 for every subsequent 1 hour or part thereof
After 5 pm	$2 per entry

If Mrs Lim parked her car from 1.30 pm to 6.15 pm, how much did she pay?

Ans: $_____

5. The school conducted a survey with some pupils on how they travelled to school. There were twice as many boys as girls who travelled to school by MRT.

$\frac{1}{5}$ of those who travelled by bus were girls. The table below shows the findings.

Study the table and find the number of boys who went to school by MRT.

	Walk	MRT	Car	Bus	Total
Boys	5	?	24	?	107
Girls	10	?	12	8	53

Ans: _____

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)

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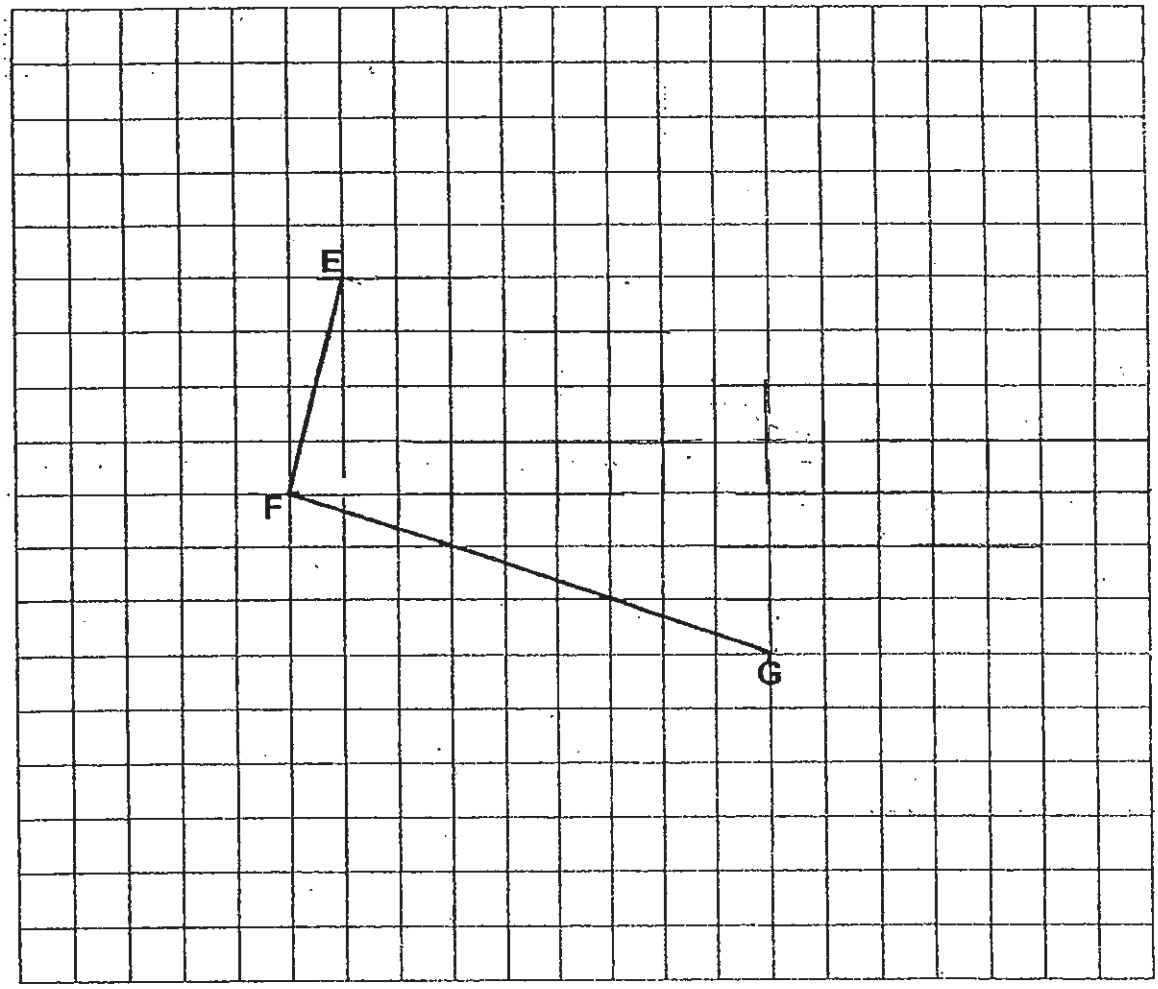
5. EF and FG are two sides of a parallelogram EFGH. Complete the parallelogram by drawing the other two sides in the square grid below.

(b) Draw a line from point F to point H. Find ∠ FHG in the parallelogram.



[2]

Ans: (b) _____ [1]

7. There were 48 rats hiding in 3 containers. 5 rats left the first container to stay in the second container and 4 rats left the second container to stay in the third container. After 1 rat had left the third container to stay in the first container, there was an equal number of rats hiding in each container.
How many **more** rats were there in the second container than the third container at first?

Ans:_____ [3]

8. There were some children at a party. $\frac{3}{4}$ of the children were boys.

After $\frac{1}{2}$ of the girls had left the party, there were 30 more boys than girls remaining at the party.

How many children were at the party at first?

Ans: _____ [3]

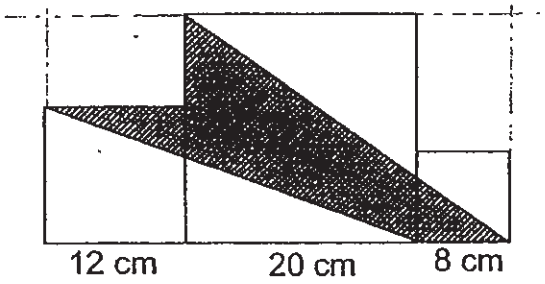
9. John has $m. Sally has 3 times as much money as John. Ravi has $8 less than the total of John and Sally.

(a) Express the total amount of money the three children have in terms of m.
(b) If m = 15, how much more does Ravi have than John?

Ans: (a) _____ [2]

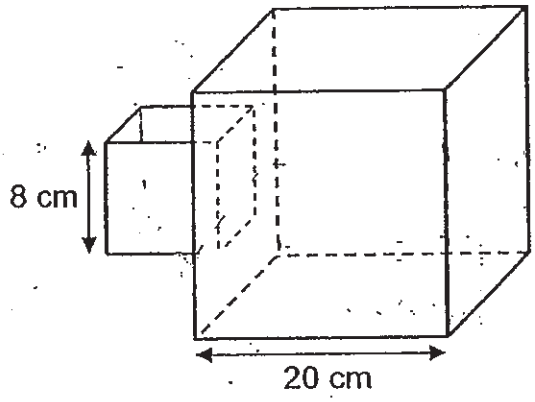
(b) _____ [1]

10. The figure below is made up of three squares of sides 8 cm, 12 cm and 20 cm. Find the shaded area.



Ans: _____ [3]

11. The figure shows an empty tank. It is made from two containers. The containers are in the form of 2 cubes of sides 8 cm and 20 cm respectively. The small container is attached to the centre of one of the sides of the big container.

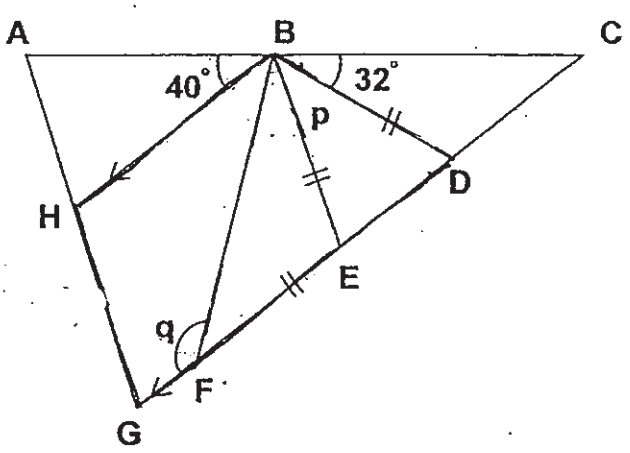


4 litres of water is poured into the big container such that water flows in to fill part of the small container.
What is the height of the water level in the big container? Round off your answer to two decimal places.

Ans: _____ [4]

12. In the diagram, HBDG is a trapezium and triangles BEF and BDE are isosceles triangles. AC, AG and GC are straight lines. BD = BE = EF.

(a) Find ∠p.
(b) Find ∠q.



Ans: (a) _____[2]

(b) _____[2]

13. A car left City A for City B at 8 am travelling at an average speed of 60 km/h. One hour later, a bus started its journey from City B for City A. At 11.30am, the two vehicles were 35 km apart after passing each other earlier. If the car reached City B at 1pm, at what time would the bus arrive at City A?

Ans: _____ [4]

14. There were 70 more girls than boys in a carnival one day. On the next day, the number of boys increased by 30% but the number of girls decreased by 20%. There were 686 children on the second day. How much money was collected over the two days if children paid $3 each to enter the carnival?

Ans: _____ [4]

15. The table below shows the admission charges at a tourist attraction.

Admission Charges	
Children	**$2**
Adults	**$5**
Senior Citizens	**$3**
Promotion: **1 Child enters free for every 4 Adults (excluding Senior Citizens)**	

A group of people visited the attraction. The ratio of the number of children to the number of adults to the number of senior citizens was 3 : 6 : 4. The number of adults in the group could be divided into groups of 4 exactly. If the group paid a total of $270 on admission charges, how many children were there in the group?

Ans: _____ [5]

16. There were some fruits in a warehouse. $\frac{3}{7}$ of them were apples and the rest were oranges. After throwing away 27 apples and $\frac{1}{4}$ of the oranges that were rotten, there were $\frac{3}{5}$ of the fruits left.

(a) How many fruits were thrown away?

(b) How many apples were there at first?

Ans: (a) _____ [4]

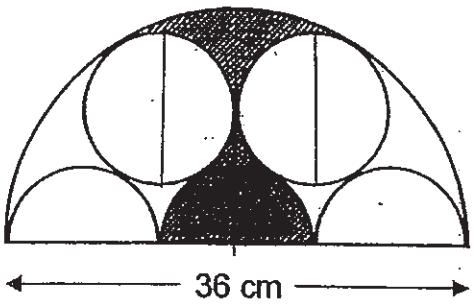
(b) _____ [1]

17. Mrs Tan had some red and blue balloons in a bag. The number of red balloons was twice the number of blue balloons. She started removing balloons from the bag, each time taking out 4 red balloons and 6 blue balloons. After a while, only 120 red balloons were left in the bag. What was the total number of red and blue balloons in the bag at first?

Ans: _____ [4]

18. A piece of wire is used to make the figure shown below. Inside the big semicircle are 2 circles and 3 small semicircles, all of which have the same radius.

(a) Find the length of the wire used. Correct your answer to 2 decimal places.
(b) Find the total shaded area. Express your answer in terms of π.



Ans: (a) _____ [2]

(b) _____ [3]

END OF PAPER

ANSWER SHEET

EXAM PAPER 2010

SCHOOL : HENRY PARK PRIMARY
SUBJECT : PRIMARY 6 MATHEMATICS

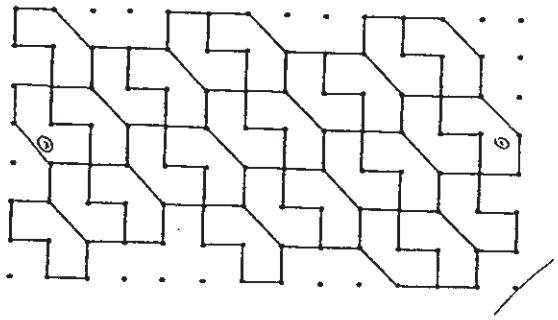
TERM : PERLIMINARY

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

16)10.1, 7.62, 7.399, 1.998 **17)971499** **18)84min** **19)8cm**

20)50cm **21)Lai Leng** **22)18** **23)225°** **24)74°**

25)80% **26)36** **27)**

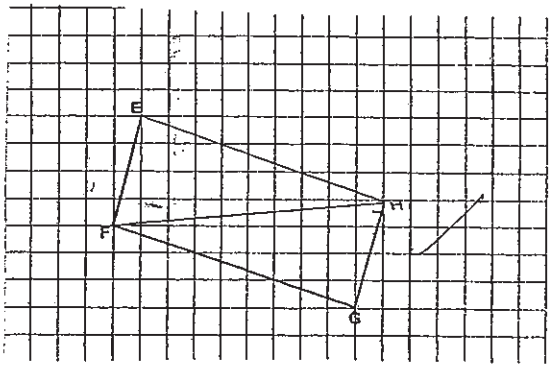


28)135 **29)75°** **30)$1.60**

Paper 2

1)105cm **2)81** **3)18 years** **4)$5.50** **5)46**

6)b)70°



7)2 **8)48**

9)a)$(8m – 8)
b)$37

10)232cm2

11)9.45cm

12)a)36°
b)144°

13)3pm

14)$4068

15)18

16)a)42
b)45

17)270

18)a)224.50cm
b)30Πcm2