

ICSE Board
Class VI
Mathematics
Sample Paper – 2

Time: 2 hrs 30 min

Total Marks: 80

General Instructions:

1. Answers to this paper must be written on the paper provided separately.
2. You will not be allowed to write during the first 15 minutes.
3. This time is to be spent in reading the question paper.
4. The time given at the head of this paper is the time allowed for writing the answers.
5. Attempt all questions from Section A. Solve any four questions from Section B.
6. All working, including rough work, must be clearly shown and must be done on the same sheet as the rest of the answer.
7. Omission of essential working will result in loss of marks.
8. The intended marks for questions or parts of questions are given in brackets [].

Section A (40 marks)

Question 1

- (a) Write the following numbers in the descending order of their values and represent them on a number line.
- i. 8, -6, 2, -12, 0, 3, 15 and -1
 - ii. Integers greater than -6 and less than 2. [2]
- (b) Aruna covered $\frac{1}{2}$ the distance to school by walking and $\frac{1}{3}$ the distance by bus and the rest by train. Find out the fraction of distance covered in the train? [2]
- (c) Evaluate: $5x - 14 = x - (24 + 4x)$ [3]
- (d) State whether true or false: [3]
- i. {3, 5, 7,} is a finite set.
 - ii. A line has infinite number of points on it.
 - iii. $0.45 = 45\%$

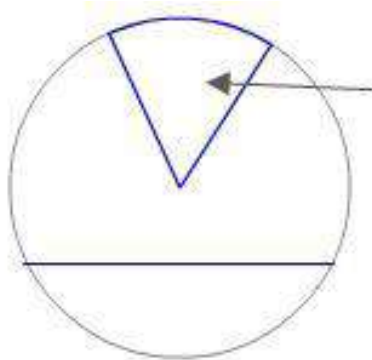
Question 2

- (a) What are the greatest and smallest possible numbers which can be formed using the digits 9, 8, 7 and 4 without repetition and with 7 always at the ones place? [2]
- (b) Express each of the following as an algebraic expression. [2]
- i. Sum of y and 7.
 - ii. number m divided by 23 and added to 5
- (c) The sides of a triangle are in the ratio 3 : 2 : 4. If the perimeter of the triangle is 27cm, find the length of each side. [3]
- (d) The H.C.F. and L.C.M. of two numbers are 144 and 6480, respectively. If one of the numbers is 720, find the other number. [3]

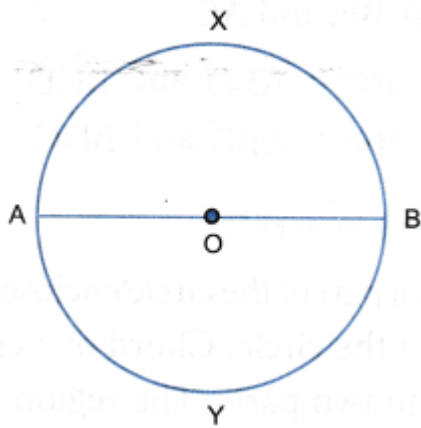
Question 3

(a) Name the following:

[3]



- i. Name the two parts of the circle in blue.



- ii. What is AB and how does it divide the circle.

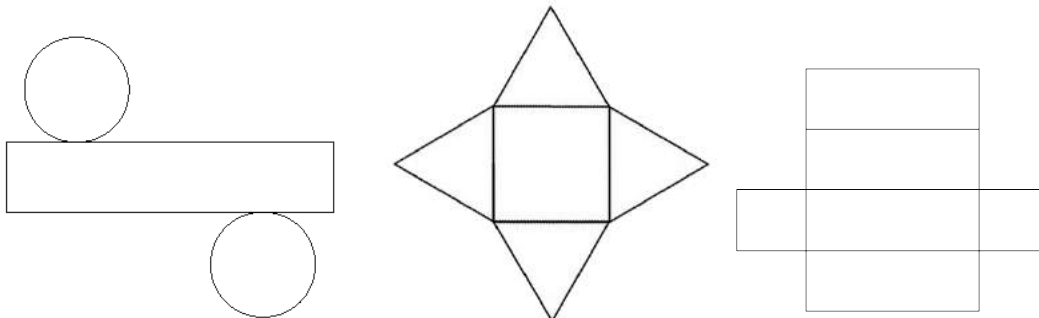
(b) Use the divisibility tests to determine whether the number 505 is divisible by 2, 3, 4, 5, 6 and 9. [3]

(c) Construct an angle of 60° , using a ruler and compass. [4]

Question 4

(a) Add the expressions: $-17x^2 - 2xy + 23y^2$, $-9y^2 + 15x^2 + 7xy$ and $13x^2 + 3y^2 - 4xy$ [3]

(b) Identify the 3D shapes which form the following nets: [3]



(c) Find the H.C.F. of 780 and 462 by the division method. [4]

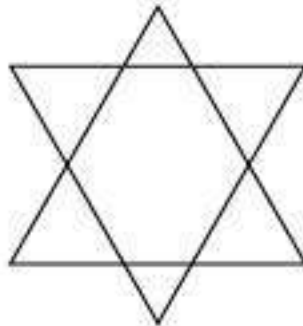
Section B (40 marks)

Question 5

(a) Write each statement below in algebraic form: [3]

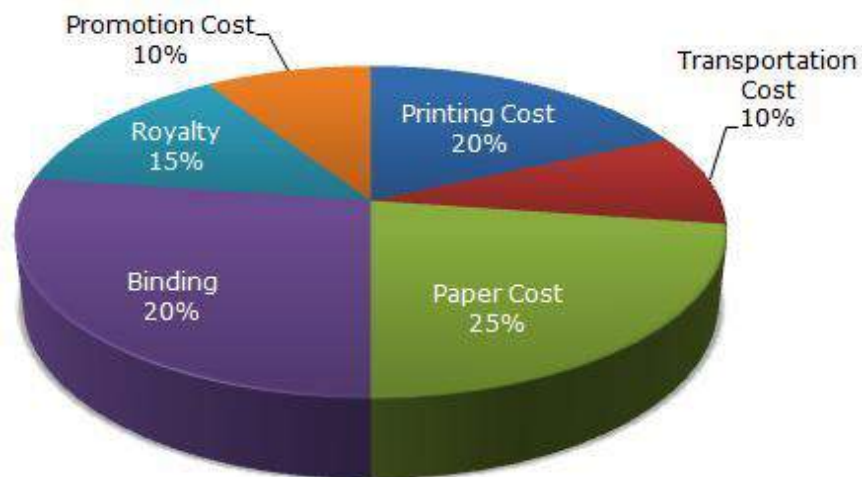
- i. 28 more than twice of x is equal to 45.
- ii. $3y$ reduced by $5z$ is greater than $8x$.
- iii. $6x$ divided by $13y$ is less than 17.

(b) Mark the lines of symmetry in the given figure? [2]



(c) The area of a rectangular plot is 340 m^2 . If its breadth is 17 m , find its length and perimeter. [3]

(d) The following pie-chart shows the percentage distribution of the expenditure incurred in publishing a book. Study the pie-chart and the answer the questions based on it. [3]



- i. If for a certain quantity of books, the publisher has to pay Rs. 30,600 as printing cost, what will be the amount of royalty to be paid for these books?
- ii. What is the central angle of the sector corresponding to the expenditure incurred on Royalty?

Question 6

- (a) From the sum of $x + y - 2z$ and $2x - y + z$ subtract $x + y + z$ [3]
- (b) Divide 81 into three parts in the ratio 2 : 3 : 4 [3]
- (c) A vegetable trader buys some tomatoes and onions for Rs. 420 such that the ratio of the total weight of tomatoes to the total weight of onions is 2 : 3. The total weight of the tomatoes and onions is 60 kg. If the ratio of the total price of tomatoes to the total price of onions is 8 : 27, then what is the cost of 5 kg of tomatoes and 5 kg of onions. [4]

Question 7

- (a) Simplify: $3(a + b) - 2(2a - b) + 4a - 7$ [3]
- (b) Find the cost of fencing a rectangular park of length 250 m and breadth 175 m at the rate of Rs. 12 per metre. [3]
- (c) Write each of the following sets in roster form as well as in set builder form:
- 1) Set of factors of 48
 - 2) Set of integers between -3 and 8 [4]

Question 8

- (a) A school has 1625 students out of which 750 are girls and the rest are boys. [3]
Find the ratio between the number of boys to the number of girls in the school.
- (b) Construct a perpendicular line from a point not on the line. [4]
- (c) Find the value of : $3x^3 - 4x^2 + 5x - 6$, when $x = -1$ [3]

Question 9

- (a) The following data gives total marks (out of 500) obtained by 5 students of class VII. Represent the data by a bar graph. [3]

Student	Ayay	Raj	Desu	Deepak	Sonal
Marks obtained	350	375	400	450	485

- (b) Name the types of the following sets: [3]
- i. Set of even numbers which are not divisible by 2.
 - ii. {Number of people in India}
 - iii. Set of odd numbers between 7 and 19.

- (c) Simplify: $\frac{\frac{4}{5} - \frac{1}{4}}{\frac{9}{20} + 1\frac{3}{10}}$ [4]