

2021
CLASS-VIII(Phase I)
MATHEMATICS

Total marks : 40

Time : 1½ hours

General Instructions:

- i) *Approximately 8 minutes is allotted to read the question paper and revise the answers.*
 - ii) *The question paper consists of 13 questions.*
 - iii) *All questions are compulsory.*
 - iv) *Internal choice has been provided in some questions.*
 - v) *Marks allocated to every question are indicated against it.*
- N.B:** *Check to ensure that all pages of the question paper is complete as indicated on the top left side.*

Section - A

1. **Choose the correct answer from the given alternatives.**

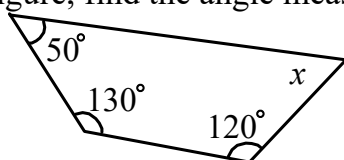
- (a) The additive inverse of $-\frac{7}{19}$ is **1**
- (i) $\frac{7}{19}$ (ii) $\frac{19}{7}$ (iii) $-\frac{7}{19}$ (iv) $-\frac{19}{7}$
- (b) What is the name of a regular polygon of 6 sides? **1**
- (i) Square (ii) Equilateral triangle
(iii) Regular hexagon (iv) Regular octagon
- (c) The unit digit in the square of 799 is **1**
- (i) 1 (ii) 7 (iii) 8 (iv) 9
- (d) The number of digits in the square root of 27225 is **1**
- (i) 1 (ii) 2 (iii) 3 (iv) 4
- (e) Which of the following is a binomial? **1**
- (i) xy (ii) $x+y$ (iii) $7+y+5x$ (iv) $3x+4y-z+5$

Section – B

2. Find two rational numbers between $\frac{2}{3}$ and $\frac{4}{5}$ **2**

3. Solve the equation: $\frac{8x - 3}{3x} = 2$ 2

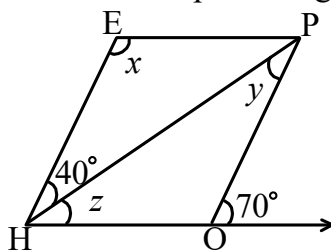
4. In the following figure, find the angle measure x . 2



5. Find the product: $\left(-\frac{10}{3} pq^3\right) \times \left(\frac{6}{5} p^3 q\right)$ 2

Section – C

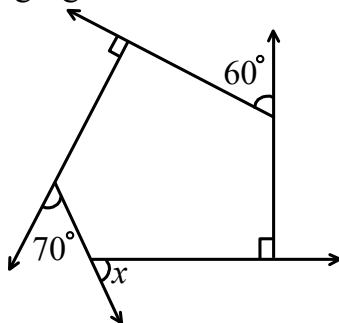
6. a. The following figure HOPE is a parallelogram. Find the angle measures x , y and z .



Or 3

b. Two adjacent angles of a parallelogram have equal measure. Find the measure of each of the angles of the parallelogram.

7. Find x in the following figure. 3



8. Construct the quadrilateral ABCD where $AB = 4.5$ cm, $BC = 5.5$ cm, $CD = 4$ cm, $AD = 6$ cm, $AC = 7$ cm. (Traces of construction only is required.) 3

9. a. Find the least number which must be subtracted from 402 so as to get a perfect square. Also, find the square root of the perfect square so obtained.

Or 3

b. There are 500 children in a school. For a P.T. drill, they have to stand in such a manner that the number of rows is equal to the number of columns. How many children would be left out in this arrangement?

10. Using $a^2 - b^2 = (a + b)(a - b)$, find $12.1^2 - 7.9^2$ 3

Section – D

11. a. A positive number is 5 times another number. If 21 is added to both the numbers, then one of the new numbers becomes twice the other new number. What are the numbers?

Or 4

b. The ages of Temjen and Mary are in the ratio 5 : 7. Four years from now, the ratio of their ages will be 3 : 4. Find their present ages.

12. Draw a pie chart showing the following information. The table shows the colours preferred by a group of people. 4

Colours	Number of people
Blue	18
Green	9
Red	6
Yellow	3
Total :	36

13. The shoppers who come to a departmental store are marked as : man (M), woman (W), boy (B) or girl (G). The following list gives the shoppers who came during the first hour in the morning:

W W W G B W W M G G M M W W W W G B M W B G G M W W M M W W
W M W B W G M W W W G W M M W W M W G W M G W M M B G G W

Make a frequency distribution table using tally marks. Draw a bar graph to illustrate it. 4
