# INDIAN SCHOOL DARSAIT

## SAMPLE PAPER
## MATHEMATICS

Class: VIII                                                                    Max. Marks: 80
Date:                                                                          Time: 3 Hours

### *General Instructions:*

- ❖ *All questions are compulsory.*
- ❖ *The question paper consists of 40 questions divided into 4 sections- A, B , C and D.*
  *Section A consists of 20 questions of 1 mark each , Section B consists of 6 questions of 2marks*
  *each. Section C consists of 8 questions of 3marks each. Section D*
  *consists of 6 questions of 4 marks each.*
- ❖ *There is no overall choice in the question paper.*
- ❖ *Use of calculator is not permitted.*

### SECTION A
### Question numbers 1 to 20 carry 1 mark.

**I   Choose the correct answer from the choices given.**

1. The product of the additive inverse and multiplicative inverse of $\dfrac{-1}{3}$ is                    1

   A)1        B)3        C)-1        D) $\dfrac{1}{3}$

2. The solution of the equation 3x - 5 = 10 is                                                  1
   A) 5        B)-3        C)-5        D)15

3. The measure of each exterior angle of a regular pentagon is                                  1
   A)$54^0$        B)$72^0$        C)$60^0$        D)$70^0$

4. How many measures are required to construct a unique quadrilateral?                          1
   A)3        B)4        C)5        D)2

5. A number from 1 to 10 is chosen at random. The chance of choosing a number greater than 2 is    1

   A) $\dfrac{2}{5}$        B) $\dfrac{3}{10}$        C) $\dfrac{7}{10}$        D) $\dfrac{4}{5}$

6. The additive identity of the given number $\dfrac{256}{800}$ is                             1

   A) 1        B)2        C) 3        D)0

7. The perimeter of a rectangle is 14 cm and its width is 3cm. Then its length is :             1
   A) 5 cm    B)4 cm        C)2 cm        D)7 cm

8. If the sum of interior angles of a polygon is$1800^0$ , then the number of sides is          1
   A)10        B)14        C)12        D)18

9. When a die is rolled once , the probability of getting a number less than 7 is               1

   A)0        B)$\dfrac{1}{2}$        C) 6        D) 1

10. Among the following numbers which one does not have a reciprocal                            1

   A) 1        B)0        C)$\dfrac{1}{2}$        D) -1

## II Fill in the blanks.

11. The sum of 1 and additive inverse of 1 is _____.  1

12. If $2y - \dfrac{1}{2} = y - \dfrac{1}{2}$ , then the value of y is _____.  1

13. A polygon with all the sides equal is called a _____.  1

14. From a deck of 52 playing cards , one card is chosen at random. The probability that it is a Red queen is _____.  1

15. The sum of all the exterior angles of a polygon is _____.  1

## III State TRUE or FALSE

16. The reciprocal of a positive number is negative.  1

17. All rhombuses are parallelograms.  1

18. We can construct a quadrilateral with measures $\angle A = 100^0$, $\angle B = 50^0$ $\angle C = 160^0$ and $\angle D = 80^0$  1

19. A number divided by three and added to twice the number gives 15 is represented by the linear equation $\dfrac{x}{3} + 2x = 15$.  1

20. Probability can be zero.  1

## SECTION B
### Questions 21 to 26 carries 2 marks each

21. The sum of two rational numbers is $\dfrac{-5}{12}$. If one of the numbers is $\dfrac{8}{21}$ , find the other.  2

22. Solve for z :
$$\dfrac{4z + 7}{9 - 3z} = \dfrac{1}{4}$$  2

23. The measure of two angles of a quadrilateral are $120^0$ and $50^0$ and the other two angles are equal. Find the measure of each of the angles.  2

24. The time taken in seconds to solve a problem by each of 25 pupils is as follows:

10 , 16 , 20 , 26 , 27 , 28 , 30 , 33 , 37, 38 , 40 , 42 , 43 , 46 , 46 , 48 , 49 , 50 , 53 , 58 , 59 , 60 , 64 , 53 , 20 .

Construct a frequency distribution table for these data , using a class interval of 10 seconds.  2

25. A bag contains 5 white , 6 red and 4 green balls. One ball is drawn at random. What is the probability that the ball drawn is (i) green ? (ii) white ? (iii) non- red?  2

26. Construct a rectangle with side of lengths 4 cm and 5 cm.  2

## SECTION C
### Questions 27 to 34 carries 3 marks

27. i) Add $\frac{4}{7}$ by the reciprocal of $\frac{7}{16}$

    ii) Multiply $\frac{4}{5}$ by the additive inverse of $\frac{-15}{16}$

    3

28. Name the property used :

    i) $\frac{-3}{5} \times 1 = 1 \times \frac{-3}{5} = \frac{-3}{5}$

    ii) $\frac{-3}{5} + \frac{7}{5} = \frac{7}{5} + \frac{-3}{5}$

    iii) $\frac{4}{5} \times (\frac{1}{5} \times \frac{3}{5}) = (\frac{4}{5} \times \frac{1}{5}) \times \frac{3}{5}$
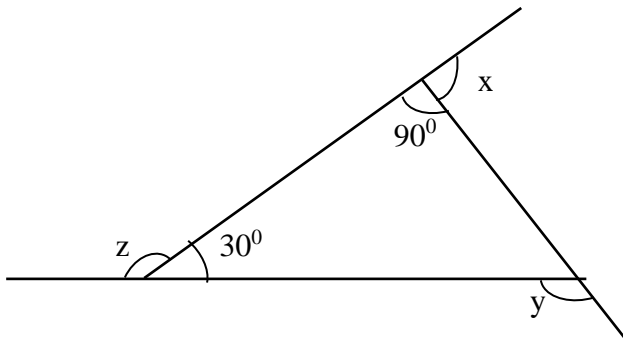
    3

29. Solve i) $8x + 3 - 3(x - 1) = x - 2$

    ii) $\frac{2+m}{3+m} = 5$

    3

30. Three consecutive integers add upto 51. What are these integers ?

    3

31. Four angles of an eight sided polygon are each equal to $154^0$ . If the remaining 4 angles are equal , find the measure of each of the angles.

    3

32.



    Find x , y and z.

    3

33. Construct a quadrilateral ABCD in which AB = 5.5cm, BC= 5cm, CD= 6cm, AD = 4.5cm, and AC= 6cm.

    3

34. The daily income of 500 workers of a factory are given below. Draw a histogram for the data.

    3

| Class interval (Daily income in Rupees) | Frequency (Number of workers) |
|---|---|
| 100 – 125 | 45 |
| 125 – 150 | 25 |
| 150 – 175 | 55 |
| 175 – 200 | 125 |

| | |
|---|---|
| 200 – 225 | 140 |
| 225 – 250 | 110 |

## SECTION D
### Questions 35 to 40 carries 4 marks

23. Find $\frac{2}{5} \times \frac{-3}{7} - \frac{1}{14} - \frac{3}{7} \times \frac{3}{5}$ .Also name the properties used.   4

24. Solve $\frac{3t-2}{4} - \frac{2t+3}{3} = \frac{2}{3} - t$   4

25. The number of boys and girls in a class are in the ratio 5 : 4. If the number of boys is 9 more than the number of girls , find the total number of children in the class.   4

26. Construct a rhombus whose diagonals are 5.2 cm and 6.4 cm long.   4

27. Find the four angles A, B, C and D of the parallelogram ABCD.   4
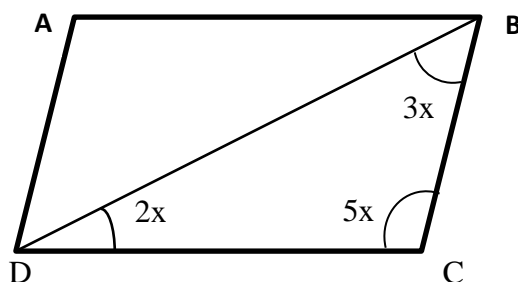


30. The data on the mode of transport used by 720 students are given below:   4

| Mode of transport | Bus | Cycle | Train | Car | Scooter |
|---|---|---|---|---|---|
| No. of students | 120 | 180 | 240 | 80 | 100 |

Represent the above data by a pie chart.