



Class - IX
Periodic Assessment-I
(2024-25)
Mathematics

Siddhant
9B

Date : 20 May, 2024
Time Allowed: 1Hr 30 Mins

Roll No.: 15.....
Maximum Marks : 40

General Instructions:

- This Question Paper has 5 Sections A,B,C,D and E.
- Section A has 10 MCQs and 01 Assertion-Reason based question carrying 1 mark each
- Section B has 3 Very Short Answer type questions of 2 marks each.
- Section C has 3 Short Answer type questions of 3 marks each.
- Section D has 2 Long Answer type questions of 5 marks each.
- Section E has 1 case based integrated unit of assessment of 4 marks.

Section – A (11x1=11 Marks)

1. Which of the following statements is/are correct? (1)
- Every integer is a rational number.
 - Every rational number is an integer.
 - A real number is either rational or irrational number.
 - Every whole number is a natural number.

11. Assertion : $\sqrt{2}$, $\sqrt{3}$ are examples of irrational numbers.
Reason: An irrational number can be expressed in the form $\frac{p}{q}$. (1)
- a) Both Assertion and Reason are correct and Reason is the correct explanation for Assertion.
b) Both Assertion and Reason are correct but Reason is not correct explanation for Assertion.
c) Assertion is correct but Reason is false.
d) Both Assertion and Reason are false.

Section – B (3x2=6 Marks)

12. Find the values of x and y, if two ordered pairs (x-3, -6) and (4, x + y) are equal. (2)
13. Express 1.8181... in the form $\frac{p}{q}$ where p and q are integers and $q \neq 0$. (2)
14. Rationalise the denominator of $\frac{1}{7+3\sqrt{3}}$. (2)

Section – C (3x3=9 Marks)

15. Represent $\sqrt{3}$ on the number line. (3)
16. Simplify : $\sqrt{45} - 3\sqrt{20} + 4\sqrt{5}$ (3)
17. a) Find the value of m if (5, 8) is a solution of the equation $11x - 2y = 3m$. (1)

- b) Find two more solutions of the equation so formed above. (2)

Section – D (2x5=10 Marks)

18. Answer the following: (1x5=5)
- a) Name the quadrant in which the point will lie, if the ordinate is 5 and abscissa is - 3.
 - b) What is the distance of point (3,-7) from x-axis?
 - c) Write one example of non-terminating, non-recurring decimal expansion.
 - d) Check whether (1,-2) is a solution of $2x - y = 6$.
 - e) If the x- coordinate of a point is zero, then where does the point lie in the coordinate plane?

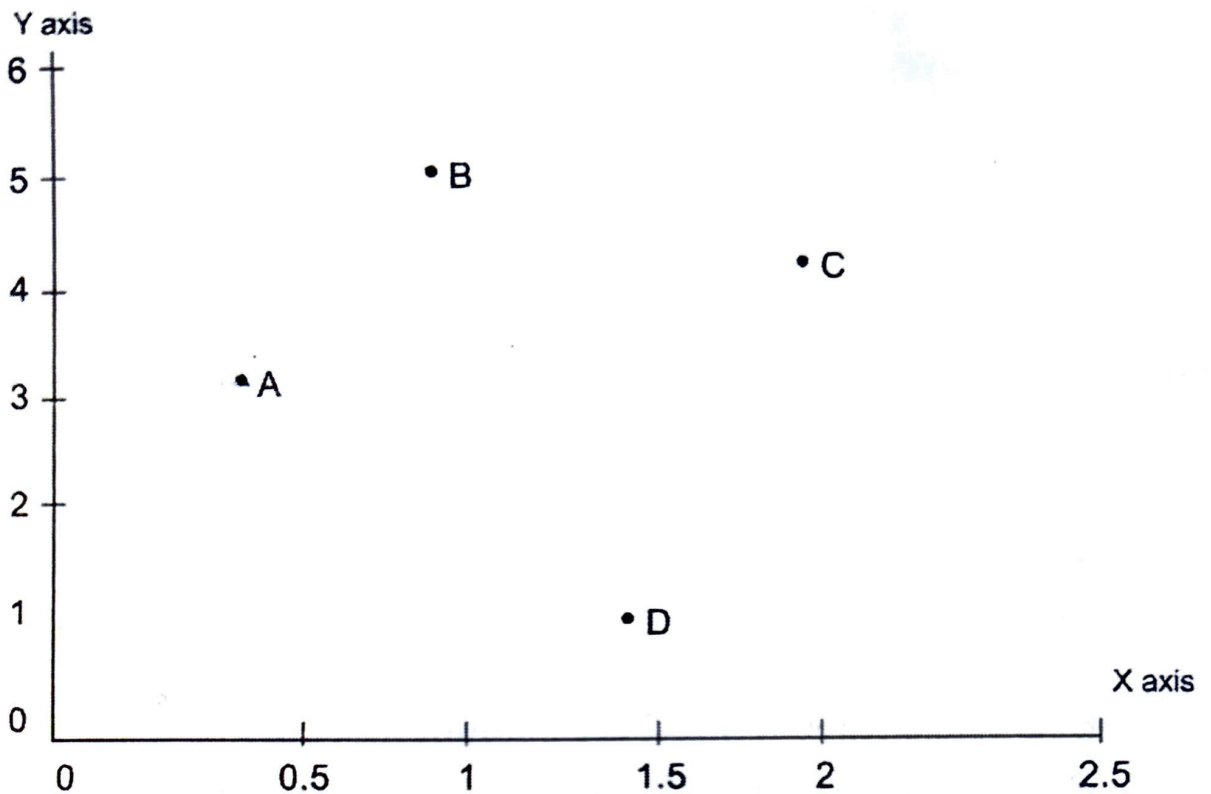
19. Prove that: (5)

$$\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \frac{1}{\sqrt{3}+\sqrt{4}} + \dots + \frac{1}{\sqrt{8}+3} = 2$$

Section – E (1x4=4 Marks)

Case study based question

20. The students of a school are standing in rows and columns in the playground for a drill practice. A, B, C and D are the positions of four students as shown in the following figure.



Now answer the following questions:

- a) What is the perpendicular distance of point B from x-axis? (1)
- b) What is the product of ordinate of A and abscissa of C? (1)
- c) What are the coordinates of A? (1)
- d) Name the figure formed after joining the four points. (1)