

CARMEL CONVENT SCHOOL (CHANDIGARH)  
UNIT TEST I (2024-25)

Class- IX  
Subject- Mathematics  
Date- 21.05.2024

Maximum Marks: 20  
Time Allowed: 45 minutes

General Instructions:

1. This Question Paper has 4 Sections A-D
2. Section A has 4 MCQs carrying 1 mark each
3. Section B has 3 questions carrying 02 marks each.
4. Section C has 2 questions carrying 03 marks each.
5. Section D has 1 question carrying 4 marks each
- 6 All Questions are compulsory

**Section A**

Q1 Area of an isosceles <sup>right angle</sup> triangle is  $200\text{cm}^2$ . Length of hypotenuse is  
a)  $20\text{cm}$     b)  $10\text{cm}$     c)  $10\sqrt{2}$      d)  $20\sqrt{2}$

Q2 Point  $(-4,5)$  lies in /on the  
a) X-axis     b) second quadrant    c) third quadrant    d) fourth quadrant

Q3 Area of equilateral triangle having side  $6\text{cm}$  is:  
 a)  $9\sqrt{3}\text{ cm}^2$     b)  $18\sqrt{3}\text{ cm}^2$     c)  $36\sqrt{3}\text{ cm}^2$     d)  $12\sqrt{3}\text{ cm}^2$

Q4 Given below are two statements marked as Assertion (A) and Reason (R).

Assertion:  $\sqrt{64} - 6$  is a rational number  $\tau$

Reason: Every integer and all types of decimal numbers are rational numbers  $\checkmark$

Which of the following is true?

- a) Both Assertion & Reason are True & the Reason is a correct explanation of the Assertion.
- b) Both Assertion & Reason are True but Reason is not a correct explanation of the Assertion.

c). Assertion is True but the Reason is False.

d). Both Assertion & Reason are False.

### Section B

Q5 Find coordinates of following points :

- a) ordinate is -10 and abscissa is +5  $(5, -10)$   
b) 6 lies on y axis  $(0, 6)$

Q6. Rationalise:  $\frac{3}{\sqrt{7}-\sqrt{2}} = \frac{3\sqrt{7}+3\sqrt{2}}{5}$

Q7. Sides of triangle are  $x, x+1, 2x-1$  and area of triangle is  $x\sqrt{10}$  Find value of  $x$  using Herons formula 6

### Section C

Q8a) Represent  $\sqrt{3}$  on number line

OR

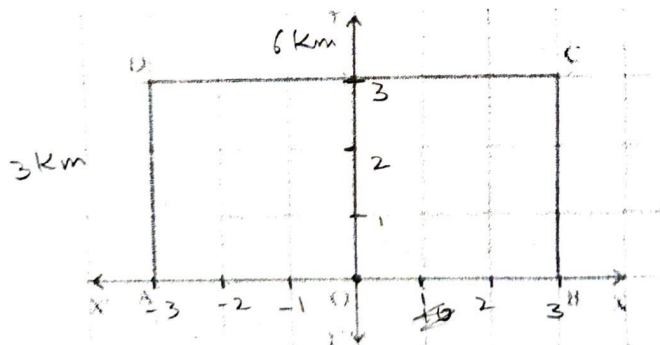
a) Represent  $\sqrt{9.3}$  on number line

b) Express  $5.34777777\dots$  in  $\frac{p}{q}$  form  $\frac{4813}{900}$

Q9. Semi perimeter of triangular ground is 450 m and it's sides are in the ratio 3:5:4 Using Herons formula, find area of the ground 33750

### Section D

Q10, Farmer divided his field ABCD between two sons equally. Length of field is 6 km and breadth is 3km. O is midpoint of AB. Taking O as origin, find coordinates of A, B, C & D.



$$\begin{aligned} A &= (-3, 0) \\ B &= (3, 0) \\ C &= (3, 3) \\ D &= (-3, 3) \end{aligned}$$

THE END