Siya Garg
IX-A
39

**CARMEL CONVENT SCHOOL**
**UNIT TEST-1**
**SUBJECT- MATHEMATICS**
**SESSION- 2023-2024**
**CLASS- IX**

**Maximum Marks: 20** **Time: 1 hour**

**General Instructions:**

a) **All questions are compulsory.**
b) **SECTION-A Q1 to Q4 -1 mark each. (MCQ)**
c) **SECTION-B Q5 to Q7 - 2 marks each.**
d) **SECTION-C Q8, Q9 - 3 marks each.**
e) **SECTION-D Q10 - 4 marks (1+1+1+1) – Case Study.**

## SECTION-A

**Q1)** Which of the following is a non-terminating decimal?

a) $\frac{6}{40}$ b) $\frac{15}{200}$ c) $\frac{7}{18}$ d) $\frac{9}{250}$

**Q2)** The semi-perimeter of a triangle having the length of its sides as 20 cm, 15 cm and 9 cm is:

a) 44 cm b) 21 cm c) 22 cm d) 24 cm

**Q3)** A point P (x, y) lies in the 4th quadrant. The signs of x and y are:

a) (+, +) b) (-, +) c) (+, -) d) (-, -)

**Q4)** An irrational number lying between 0.26 and 0.27 is _____.

a) 0.2567981284..... b) 0.2552555255552..... c) 0.267864231.....

d) 0.271271127111271111.....

## SECTION-B

**Q5)** Find the area of the triangle whose sides are 8 cm, 11 cm and 16 cm.

**Q6)** Show how $\sqrt{9.3}$ can be represented on the number line.

**Q7)** Simplify $(64)^{-2/3}$

## SECTION-C

**Q8)** Express $0.2\overline{35}$ in the $\frac{p}{q}$ form, where p and q are integers and $q \neq 0$. $\frac{233}{990}$

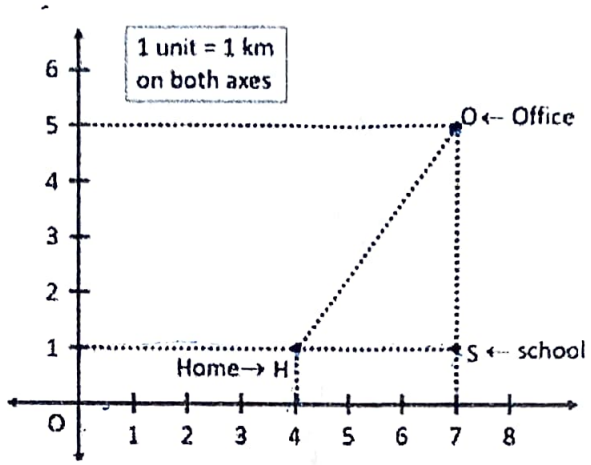
**Q9)** Rationalise the denominator and hence find the value of 'a' and 'b' in:

$\frac{3+2\sqrt{5}}{3-2\sqrt{5}} = a + b\sqrt{5}$

## SECTION-D

**Q10)** Case study:

Rama has to reach her office every day at 10:00 a.m. On the way to her office, she drops her son at school. Now, the location of Rama's house, her son's school and her office are represented by the map given below. Using the details given, answer the following questions.




i) Find the coordinates of Rama's home. 4, 1

ii) Find the distance between Rama's home and her son's school. 3Km

iii) Find the coordinates of Rama's office. 7, 5

iv) Find the coordinates of Rama's son's school. 7, 1