PRACTICE SHEET FOR IMPROVING LEARNING OUTCOMES
SUBJECT-MATHEMATICS

CLASS- 9th   **WEEK-1st**

M:M - 20   **TIME: 45 Mins**

MCQs

Learning Outcomes:

- Applies logical reasoning in classifying real numbers, and proving their properties in order to use them in different situations.
- Identifies /Classifies polynomials among algebraic expressions in order to apply appropriate algebraic identities to factories them.
- Develops strategies from understanding of coordinate geometry in order to locate points in a Cartesian plane.

1. The product of a rational and an irrational number is:

a) Always an integer   b) Always a rational number
c) Always an irrational number   d) Sometimes rational and sometimes irrational

2. The decimal expansion of an irrational number may be:

a) Terminating   b) Recurring
c) Either terminating or non- terminating   d) Non-terminating and non-recurring

3. A rational number between $\sqrt{2}$ and $\sqrt{3}$:
a) 1.9   b) $(\sqrt{2}. \sqrt{3})/2$ c) 1.5   d) 1.8

4. $4\sqrt{5} + 5\sqrt{5}$ is equal to:
a) $9\sqrt{5}$ b) $9\sqrt{10}$ c) $5\sqrt{10}$ d) $7\sqrt{5}$

5. $(\sqrt{5} +\sqrt{10})(\sqrt{5} -\sqrt{10})$ is equal to
a) 5   b) -10   c) -5   d) 15

6. A polynomial with one degree is called:

a) Linear polynomial   b) Quadratic polynomial
c) Monomial   d) Binomial

7. Degree of the polynomial $7x^5 + 8x^2 - 5x + 3$ is:
a) 1   b) 3   c) 2   d) 5

8. The zero of the polynomial $p(x) = -9x + 9$ is:
a) 0   b) -9   c) -1   d) 1

9. If $x + 1$ is a factor of the polynomial $2x^2 + kx$, then the value of k is:
a) -3   b) 4   c) 2   d) -2

10. The factorization of $6x^2 + 11x + 3$ is:
a) $(3x + 1)(2x + 3)$ b) $(x + 1)(2x + 3)$ c) $(x + 3)(2x + 1)$ d) $(3x + 3)(x + 1)$

11. One of the factors of $(1 + 7x)^2 + (49x^2 - 1)$ is:
a) $x - 7$ b) $7 - x$ c) $7x - 1$ d) $14x$

12. Points (1, -2)
a) Lie in III quadrant   b) Lie in II quadrant
b) c) Lie in IV quadrant   d) Lie in I quadrant

13. Abscissa of a point is positive in:

a) I and II quadrants   b) I and IV quadrants
c) I quadrant only   d) II quadrant only

14. If the perpendicular distance of a point P from the x-axis is 7 units and the foot of the perpendicular lies on the negative direction of x-axis, then the point P has:

a) y-coordinate = 7 or –7 only   b) y-coordinate = 7 only
c) y-coordinate = –7 only   d) x-coordinate = –7

15. If the coordinates of the two points are P (–7, 5) and Q (–6, 9), then (abscissa of P) – (abscissa of Q) is

a) –3   b) 1   c) –2   d) –1

CASE STUDY

Saumya has to reach her office every day at 10:00 am. On the way to her office, she drops her son at school. Now, the location of Saumya's house, her son's school and her office are represented by the map below. Using the details given, answer the following questions.
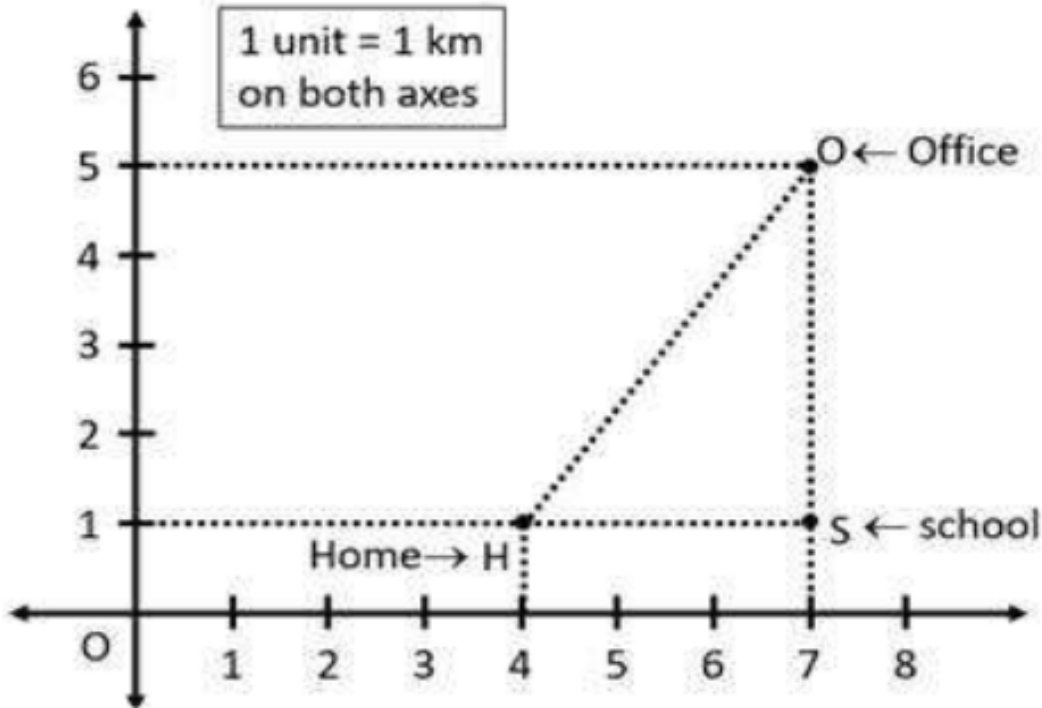
Q1. Find the coordinates of Saumya's home.
(a) (1, 4)   (b) (4, 1)   (c) (7, 1)   (d) (1, 7)

Q2. Find the coordinates of Saumya's office.
(a) (7, 5)   (b) (5, 7)   (c) (7, 1)   (d) (1, 7)

Q3. Find the coordinates of Saumya's son's school.
(a) (1, 4)   (b) (4, 1)   (c) (7, 1).   (d) (1, 7)

Q4. Find the distance between Saumya's home and her son's school.
(a) 7km.   (b) 4km.   (c) 3km   (d) 1km

Q5. Find the distance between Saumya's office and her son's school.
(a) 7km.   (b) 4km.   (c) 3km.   (d) 1km