Quadratic Equations
Module-1/3
Worsheet-1

Choose the Correct Answer:

1. Which of the following is not a quadratic equation?

   A) $x^2 + \frac{1}{x} = 1, x \neq 0$ B) $x + \frac{1}{x} = 2, x \neq 0$ C) $x^2 - 6x - 4 = 0$ D) $x^2 - 8 = 0$

2 Which of the following is a quadratic equation?

   A) $x^2 + 2x + 1 = (4 - x)^2 + 3$ B) $-2x^2 = (5 - x)\,(2x - \frac{2}{5})$ C) $(k + 1)x^2 + \frac{3}{2}x = 7$, where $k = -1$ D) $x^3 - x^2 = (x - 1)^3$

3 If $\frac{1}{2}$ is a root of the equation $x^2 + kx - \frac{5}{4} = 0$, then the value of *k* is

   A) 2 B) -2 C) $\frac{1}{4}$ D) $\frac{1}{2}$

4 For what value of *k* will $\frac{7}{3}$ be a root of the equation $3x^2 - 13x - k = 0$?

   A) 14 B) $\frac{3}{7}$ C) $-\frac{7}{2}$ D) -14

5 If $(x - a)$ is one of the factors of the polynomial $ax^2 + bx + c$, then one of the roots of $ax^2 + bx + c = 0$ is

   A) 1 B) c C) a D) none of these

Very Short Answer Type

6 Which of the following is not a quadratic equation?

   i. $2(x - 1)^2 = 4x^2 - 2x + 1$
   ii. $2x - x^2 = x^2 + 5$

7 If $x = 2$ is a solution of the equation $x^2 - 5x + 6k = 0$, then the value of *k* is _____.

8 Check whether the following are quadratic equations:

   i. $(x - 2)\,(x + 5) = (x - 3)\,(x + 4) + x^2$
   ii. $x^2 - 3x + 5 = (x + 5)^2$

9 Is $x = -2$ a solution of the equation $x^2 - 2x + 8 = 0$?

10 If *2* is a root of the equation $x^2 + bx + 12 = 0$, find the value of *b*

11 A train travels 360km at a uniform speed. If the speed had been 5km/h. More it would have taken 1 hour less for the same journey. Form quadratic equation to find the speed of the train.

12 The product of two consecutive even integers is 528. Represent the situation in the form of a quadratic equation.

****