

Class 10 Mathematics - Quadratic Equations

Name: _____

Date: _____

Advanced Worksheet 4

Questions

1. Find the value of k for which:
 $x^2 + kx + 25 = 0$
has equal roots.
2. Find the value of p for which:
 $2x^2 + px + 8 = 0$
has equal roots.
3. Determine whether it is possible to form a quadratic equation whose roots are 5 and -3 . If yes, form it.
4. Form a quadratic equation whose roots are:
 - (a) 4 and 7
 - (b) -2 and -5
5. A quadratic equation has sum of roots 9 and product of roots 14.
Form the equation.
6. For what value of m will:
 $x^2 + mx + 16 = 0$
have no real roots?

Answer Key

- 1.

Equal roots $\Rightarrow D = 0$

$$k^2 - 100 = 0$$

$$k = \pm 10$$

2.

$$D = 0$$

$$p^2 - 64 = 0$$

$$p = \pm 8$$

3.

$$\text{Sum} = 2$$

$$\text{Product} = -15$$

Equation:

$$x^2 - 2x - 15 = 0$$

4.

(a)

$$\text{Sum} = 11$$

$$\text{Product} = 28$$

$$x^2 - 11x + 28 = 0$$

(b)

$$\text{Sum} = -7$$

Product = 10

$$x^2 + 7x + 10 = 0$$

5.

$$x^2 - 9x + 14 = 0$$

6.

$D < 0$

$$m^2 - 64 < 0$$

$$-8 < m < 8$$

