

Practice Challenge - Subjective

Subject: Mathematics

Topic : Quadratic Equations Exam
Prep 1

Class: X

BYJU'S

Practice Challenge - Subjective

1. Find the roots of the equation $5x^2 - 6x - 2 = 0$ by the method of completing the square.

[3 MARKS]

2. Using quadratic formula solve the following quadratic equation: [3 MARKS]

$$p^2x^2 + (p^2 - q^2)x - q^2 = 0, p \neq 0$$

3. Find the values of k for which the given equation has real and equal roots:

[3 MARKS]

$$x^2 - 2x(1 + 3k) + 7(3 + 2k) = 0$$

4. Solve the following quadratic equations by factorization method: [4 MARKS]

$$4x^2 - 4ax + (a^2 - b^2) = 0$$

5. Find the values of k for which the following equation has equal roots: [4 MARKS]

$$(k - 12)x^2 + 2(k - 12)x + 2 = 0$$

6. A plane left 30 minutes later than the schedule time and in order to reach its destination 1500 km away in time it has to increase its speed by 250 km/hr from its usual speed. Find its usual speed. [4 MARKS]

7. Divide 16 into two parts such that twice the square of the larger part exceeds the square of the smaller part by 164.

8. If one root of the quadratic equation $2x^2 + kx - 6 = 0$ is 2, find the value of k . Also, find the other root.

[2 MARKS]