

Pt.Yad Ram Secondary Public School

Thana Road, Bhajanpura, Delhi -53

Xth - Maths

Worksheet – Chapter 4 (Quadratic Equations)

Q1. Solve for x:

$$\frac{1}{(x-1)(x-2)} + \frac{1}{(x-2)(x-3)}$$

Q2. If $x = \frac{2}{3}$ and $x = -3$ are roots of the quadratic equation $ax^2 + 7x + b = 0$, find the value of a and b.

Q3. Some students planned a picnic. The budget for food was ₹ 24. Because four of the students failed to go, the cost of food for each student got increased by ₹1. How many students attended the picnic?

Q4. In a school auditorium, the number of seats in each row is 8 less than the number of rows. How many seats are in each row if there are in all 609 seats in the auditorium?

Q5. Find the value of k for which the equation $ax^2 + 3kx + 4 = 0$ has real roots.

Q6. Solve for x: $4x^2 - 4a^2x + (a^4 - b^4) = 0$

Q7. Solve $\sqrt{4-x} + \sqrt{x+9} = 0$

Q8. If -5 is a root of the quadratic equation $2x^2 + px - 15 = 0$ and the quadratic equation $p(x^2 + x) + k = 0$ has equal roots, find the value of k.

Q9. In a test, the sum of marks obtained by a student P in Mathematics and Science is 28. Had he got 3 more marks in Mathematics and 4 marks less in Science, the products of marks obtained in the two subjects would have been 180. Find the marks obtained in the two subjects separately.

Q10. A train travels at a certain average speed for a distance of 63 km and then travels at a distance of 72 km at an average speed 6 km/h more than its original speed. If it takes 3 hours to complete total journey, represent the situation in the form of a quadratic equation.