

4. QUADRATIC EQUATIONS

2 MARK QUESTIONS

1. The sum of two numbers is 9 and the sum of the reciprocals is $\frac{1}{2}$. Find the numbers.
2. The sum of a number and its reciprocal is $\frac{10}{3}$. Find the number.
3. Find the value of k , such that the following quadratic equation has equal roots.

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

4. Solve the quadratic equation

$$\frac{x + 3}{x - 2} - \frac{1 - x}{x} = \frac{17}{4}$$

by factorisation method.

5. If -4 is a root of the quadratic equation $x^2 + px - 4 = 0$ and the quadratic equation $x^2 + px + k = 0$ has equal roots, find the value of k .
6. One root of the quadratic equation $2x^2 - 8x - k = 0$ is $\frac{5}{2}$. Find the other root and the value of k .
7. Using the quadratic formula, solve for x ,

$$9x^2 - 3(a + b)x + ab = 0$$

8. If the zeroes of the polynomial $x^2 + kx + l$ are double of the zeroes of $2x^2 - 5x - 3$, respectively, then find the value of k and l .

ANSWERS

1. 3 and 6
2. 3 or $\frac{1}{3}$
3. 4
4. 4 and $-\frac{2}{9}$
5. $k = \frac{9}{4}$
6. $k = -\frac{15}{2}$
7. $\frac{a}{3}$ and $\frac{b}{3}$
8. -5 and -6

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