

ACHIEVERS FOUNDATION

QUADRATIC EQUATION

Solve the following equations by factorization:

1. (i) $x^2 - 3x - 10 = 0$ (ii) $x(2x + 5) = 3$
2. (i) $3x^2 - 5x - 12 = 0$ (ii) $21x^2 - 8x - 4 = 0$
3. (i) $3x^2 = x + 4$ (ii) $x(6x - 1) = 35$
4. (i) $6p^2 + 11p - 10 = 0$ (ii) $2/3x^2 - 1/3x = 1$
5. (i) $3(x - 2)^2 = 147$ (ii) $1/7(3x - 5)^2 = 28$
6. $x^2 - 4x - 12 = 0$, when $x \in \mathbb{N}$
7. $2x^2 - 9x + 10 = 0$, when (i) $x \in \mathbb{N}$ (ii) $x \in \mathbb{Q}$
8. (i) $a^2x^2 + 2ax + 1 = 0$, $a \neq 0$ (ii) $x^2 - (p + q)x + pq = 0$
9. (i) $\sqrt{3}x^2 + 10x + 7\sqrt{3} = 0$ (ii) $4\sqrt{3}x^2 + 5x - 2\sqrt{3} = 0$.
10. (i) $2/x^2 - 5/x + 2 = 0$, $x \neq 0$ (ii) $x^2/15 - x/3 - 10 = 0$.
11. (i) $3x - 8/x = 2$ (ii) $(x + 2)/(x + 3) = (2x - 3)/(3x - 7)$.
12. (i) $8/(x + 3) - 3/(2 - x) = 2$ (ii) $x/(x - 1) + (x - 1)/x = 2\frac{1}{2}$
13. (i) $(x + 1)/(x - 1) + (x - 2)/(x + 2) = 3$ (ii) $1/(x - 3) - 1/(x + 5) = 1/6$.
14. $1/(x + 6) + 1/(x - 10) = 3/(x - 4)$.