

Solve the following quadratic equation by factorisation method.

11. $3(y^2 - 6) = y(y + 7) - 3$

Solution:

$$3(y^2 - 6) = y(y + 7) - 3$$

$$3y^2 - 18 = y^2 + 7y - 3$$

$$2y^2 - 7y - 15 = 0$$

$$2y^2 - 10y + 3y - 15 = 0$$

$$2y(y - 5) + 3(y - 5) = 0$$

$$(y - 5)(2y + 3) = 0 \quad \Rightarrow y = 5 \text{ or } y = \frac{-3}{2}$$

Solve the following quadratic equation by factorisation method.

12. $3x - \frac{8}{x} = 2$

Solution:

$$3x^2 - 8 = 2x$$

$$3x^2 - 6x + 4x - 8 = 0$$

$$3x(x - 2) + 4(x - 2) = 0$$

$$(x - 2)(3x + 4) = 0$$

$$\therefore x = 2 \text{ or } \frac{-4}{3}$$