

Quad 1 Answers

Solving equations by factorising p.12

$$\begin{aligned} 4a) \quad x^2 + 4x + 3 &= 0 \\ (x+3)(x+1) &= 0 \\ x &= -3, x = -1 \end{aligned}$$

$$\begin{aligned} d) \quad m^2 + 5m + 6 &= 0 \\ (m+2)(m+3) &= 0 \\ m &= -1, m = -3 \end{aligned}$$

$$\begin{aligned} g) \quad 15 - 2x - x^2 &= 0 \\ (5+x)(3-x) &= 0 \\ x &= 3, x = -5 \end{aligned}$$

$$\begin{aligned} j) \quad w^2 - 12w + 27 &= 0 \\ (w-9)(w-3) &= 0 \\ w &= 9, w = 3 \end{aligned}$$

$$\begin{aligned} m) \quad 8 - 2x - x^2 &= 0 \\ (4+x)(2-x) &= 0 \\ x &= -4, x = 2 \end{aligned}$$

$$\begin{aligned} p) \quad a^2 + 5a - 14 &= 0 \\ (a+7)(a-2) &= 0 \\ a &= -7, a = 2 \end{aligned}$$

$$\begin{aligned} b) \quad y^2 + 6y + 5 &= 0 \\ (y+5)(y+1) &= 0 \\ y &= -5, y = -1 \end{aligned}$$

$$\begin{aligned} e) \quad c^2 + 6c + 8 &= 0 \\ (c+4)(c+2) &= 0 \\ c &= -4, c = -2 \end{aligned}$$

$$\begin{aligned} h) \quad b^2 - 8b + 16 &= 0 \\ (b-4)^2 &= 0 \\ b &= 4 \end{aligned}$$

$$\begin{aligned} k) \quad 18 + 7y - y^2 &= 0 \\ (9-y)(2+y) &= 0 \\ y &= 9, y = -2 \end{aligned}$$

$$\begin{aligned} n) \quad 6 + m - m^2 &= 0 \\ (3-m)(2+m) &= 0 \\ m &= 3, m = -2 \end{aligned}$$

$$\begin{aligned} q) \quad c^2 - 2c - 15 &= 0 \\ (c-5)(c+3) &= 0 \\ c &= 5, c = -3 \end{aligned}$$

$$\begin{aligned} c) \quad a^2 + 8a + 7 &= 0 \\ (a+7)(a+1) &= 0 \\ a &= -7, a = -1 \end{aligned}$$

$$\begin{aligned} f) \quad z^2 + 7z + 12 &= 0 \\ (z+4)(z+3) &= 0 \\ z &= -4, z = -3 \end{aligned}$$

$$\begin{aligned} i) \quad x^2 - 7x + 10 &= 0 \\ (x-5)(x-2) &= 0 \\ x &= 5, x = 2 \end{aligned}$$

$$\begin{aligned} l) \quad k^2 - 10k + 24 &= 0 \\ (k-6)(k-4) &= 0 \\ k &= 6, k = 4 \end{aligned}$$

$$\begin{aligned} o) \quad t^2 - 7t - 30 &= 0 \\ (t-10)(t+3) &= 0 \\ t &= 10, t = -3 \end{aligned}$$

$$\begin{aligned} r) \quad 12 - 4p - p^2 &= 0 \\ (6+p)(2-p) &= 0 \\ p &= -6, p = 2 \end{aligned}$$

Quad 1 Answers

$$\begin{aligned} 5a) \quad 2x^2 + 7x + 5 &= 0 \\ (2x+5)(x+1) &= 0 \\ x &= -\frac{5}{2}, x = -1 \end{aligned}$$

$$\begin{aligned} d) \quad 3k^2 + 7k + 2 &= 0 \\ (3k+1)(k+2) &= 0 \\ k &= -\frac{1}{3}, k = -2 \end{aligned}$$

$$\begin{aligned} g) \quad 3 - 5w - 2w^2 &= 0 \\ (3+w)(1-2w) &= 0 \\ w &= -3, w = \frac{1}{2} \end{aligned}$$

$$\begin{aligned} j) \quad 3m^2 - 14m + 8 &= 0 \\ (3m-2)(m-4) &= 0 \\ m &= \frac{2}{3}, m = 4 \end{aligned}$$

$$\begin{aligned} m) \quad 3x^2 - 2x &= 1 \\ 3x^2 - 2x - 1 &= 0 \\ (3x+1)(x-1) &= 0 \\ x &= -\frac{1}{3}, x = 1 \end{aligned}$$

$$\begin{aligned} p) \quad 3m^2 + 2m &= 5 \\ 3m^2 + 2m - 5 &= 0 \\ (3m+5)(m-1) &= 0 \\ m &= -\frac{5}{3}, m = 1 \end{aligned}$$

$$\begin{aligned} b) \quad 2p^2 + 11p + 5 &= 0 \\ (2p+1)(p+5) &= 0 \\ p &= -\frac{1}{2}, p = -5 \end{aligned}$$

$$\begin{aligned} e) \quad 3y^2 + 8y + 5 &= 0 \\ (3y+5)(y+1) &= 0 \\ y &= -\frac{5}{3}, y = -1 \end{aligned}$$

$$\begin{aligned} h) \quad 3d^2 - 5d + 2 &= 0 \\ (3d-2)(d-1) &= 0 \\ d &= \frac{2}{3}, d = 1 \end{aligned}$$

$$\begin{aligned} k) \quad 7 + 5c - 2c^2 &= 0 \\ (1+c)(7-2c) &= 0 \\ c &= -1, c = \frac{7}{2} \end{aligned}$$

$$\begin{aligned} n) \quad 4q^2 + 5q &= 6 \\ 4q^2 + 5q - 6 &= 0 \\ (4q-3)(q+2) &= 0 \\ q &= \frac{3}{4}, q = -2 \end{aligned}$$

$$\begin{aligned} q) \quad 36v^2 &= -v + 2 \\ 36v^2 + v - 2 &= 0 \\ (4v+1)(9v-2) &= 0 \\ v &= -\frac{1}{4}, v = \frac{2}{9} \end{aligned}$$

$$\begin{aligned} c) \quad 3t^2 + 10t + 3 &= 0 \\ (3t+1)(t+3) &= 0 \\ t &= -\frac{1}{3}, t = -3 \end{aligned}$$

$$\begin{aligned} f) \quad b - 7a - 5a^2 &= 0 \\ (2+a)(3-5a) &= 0 \\ a &= -2, a = \frac{3}{5} \end{aligned}$$

$$\begin{aligned} i) \quad 5x^2 - 16x + 3 &= 0 \\ (5x-1)(x-3) &= 0 \\ x &= \frac{1}{5}, x = 3 \end{aligned}$$

$$\begin{aligned} l) \quad 1 - 5y - 6y^2 &= 0 \\ (1+y)(1-6y) &= 0 \\ y &= -1, y = \frac{1}{6} \end{aligned}$$

$$\begin{aligned} o) \quad 4t(t-1) - 3 &= 0 \\ 4t^2 - 4t - 3 &= 0 \\ (2t+1)(2t-3) &= 0 \\ t &= -\frac{1}{2}, t = \frac{3}{2} \end{aligned}$$

$$\begin{aligned} r) \quad 7s^2 &= 4 + 27s \\ 7s^2 - 27s - 4 &= 0 \\ (7s+1)(s-4) &= 0 \\ s &= -\frac{1}{7}, s = 4 \end{aligned}$$