Quadriatic Equations – Answers

Quadratic Equations 1

1) $x = 8$ or $x = -2$ 2) $x = 6$ or $x = -7$ 3) $x = 10$ or $x = -2$
4) $x = 5$ or $x = -8$ 5) $x = 3$ or $x = 5$ 6) $x = -8$ or $x = -4$
7) $x = -0.5$ or $x = -3$ 8) $x = 0.5$ or $x = -2$ 9) $x = -0.5$ or $x = 2$

10) $x = -\dfrac{2}{3}$ or $x = 5$

Quadratic Equations 2

1) $x = 3$ or $x = 5$ 2) $x = 1$ or $x = -5$ 3) $x = 9$ or $x = -4$
4) $x = -2$ or $x = -8$ 5) $x = 5$ or $x = -4$ 6) $x = 3$ or $x = 6$

Quadratic Equations 3

1) (a) $x = 0.91$ or $x = -2.57$ (b) $x = 3.74$ or $x = -1.74$

2) (a) $x = 4$ or $x = 15$ (b) $x = 4$ or $x = -12$

Problems solved by Quadratic Equations

1) 9.61 metres
2) (a) $x^2 + (x + 7)^2 = (x + 8)^2$ (c) $x = 5$
3) (a) $x^2 + (x + 6)^2 = 356$ (c) $x = 10$

Completing the Square

1) (a) $(x - 4)^2 - 6$ (b) Minimum is -6, when $x = 4$ (d) $x = 4 + \sqrt{6}$ or $4 - \sqrt{6}$

2) (a) $(x - 2.5)^2 + 2.75$ (b) Minimum is 2.75, when $x = 2.5$ (d) No solutions

3) (a) $(x + 3)^2$ (b) Minimum is 0, when $x = -3$ (d) $x = -3$ (repeated root)

4) (a) $(x - 5)^2 - 17$ (b) $(x - 1.5)^2 + 8.75$ (c) $(x + 2)^2 + 5$ (d) $(x + 0.5)^2 + 6.75$

5) (a) $2(x - 2)^2 - 7$ (b) $2(x + \dfrac{5}{4})^2 - \dfrac{11}{2}$ (c) $3(x - 2)^2 + 9$ (d) $4(x - \dfrac{3}{2})^2 - 6$