

Solving Non-Linear Simultaneous Equations

(a)	(b)	(c)	(d)
Solve $y = x^2 + 2$ $y = 3x$ $x^2 - 3x + 2 = 0$ $(x - 2)(x - 1) = 0$ $x = 2, y = 6$ $x = 1, y = 3$	Solve $y = x^2$ $y = 10 - 3x$ $x^2 + 3x - 10 = 0$ $(x + 5)(x - 2) = 0$ $x = -5, y = 25$ $x = 2, y = 4$	Solve $y = 5 + x^2$ $y = x + 11$ $x^2 - x - 6 = 0$ $(x - 3)(x + 2) = 0$ $x = 3, y = 14$ $x = -2, y = 9$	Solve $y = x^2 + 9x - 6$ $y = 5x + 6$ $x^2 + 4x - 12 = 0$ $(x + 6)(x - 2) = 0$ $x = -6, y = -24$ $x = 2, y = 16$
(e)	(f)	(g)	(h)
Solve $y = x^2 - 4$ $x + y = 8$ $x^2 + x - 12 = 0$ $(x + 4)(x - 3) = 0$ $x = -4, y = 12$ $x = 3, y = 5$	Solve $y = 6x - x^2$ $y + 5x = 24$ $x^2 - 11x + 24 = 0$ $(x - 3)(x - 8) = 0$ $x = 3, y = 9$ $x = 8, y = -16$	Solve $y = 2x^2 - 1$ $x + y = 5$ $2x^2 + x - 6 = 0$ $(2x - 3)(x + 2) = 0$ $x = \frac{3}{2}, y = \frac{7}{2}$ $x = -2, y = 7$	Solve $y = x - 3x^2$ $x - y = 3$ $3x^2 - 3 = 0$ $3(x - 1)(x + 1) = 0$ $x = -1, y = -4$ $x = 1, y = -2$