Quadratic Equations

	$y = ax^2 + bx + c$	Factorised	Complete the Square	Intercepts with y axis	Intercepts with x axis	Vertex
Example	$y = x^2 - x - 12$	$y = (x + 3)(x - 4)$	$y = \left(x - \frac{1}{2}\right)^2 - \frac{49}{4}$	$(0, -12)$	$(-3,0)$ and $(4,0)$	$\left(\frac{1}{2}, -\frac{49}{4}\right)$
1	$y = x^2 + 2x - 8$	$y = (x - 2)(x + 4)$	$y = (x + 1)^2 - 9$	$(0, -8)$	$(2,0)$ and $(-4,0)$	$(-1,9)$
2	$y = 2x^2 - 5x - 12$	$y = (2x + 3)(x - 4)$	$y = 2\left(x - \frac{5}{4}\right)^2 - \frac{121}{8}$	$(0, -12)$	$(-\frac{3}{2}, 0)$ and $(4,0)$	$\left(\frac{5}{4}, -\frac{121}{8}\right)$
3	$y = x^2 - 6x + 11$		$y = (x - 3)^2 + 2$	$(0,11)$		$(3,2)$
4	$y = 3x^2 + 30x - 77$		$y = 3(x + 5)^2 + 2$	$(0,77)$		$(-5,2)$
5	$y = x^2 - 2x - 35$	$y = (x + 5)(x - 7)$	$y = (x - 1)^2 - 36$	$(0, -35)$	$(-5,0)$ and $(7,0)$	$(1, -36)$
6	$y = -2x^2 + 4x + 70$	$y = -2(x + 5)(x - 7)$	$y = -2(x - 1)^2 + 72$	$(0,70)$	$(-5,0)$ and $(7,0)$	$(1,72)$
7	$y = 2x^2 + 7x + 3$	$y = (2x + 1)(x + 3)$	$y = 2\left(x + \frac{7}{4}\right)^2 - \frac{25}{8}$	$(0,3)$	$\left(-\frac{1}{2}, 0\right)$ and $(-3,0)$	$\left(-\frac{7}{4}, -\frac{25}{8}\right)$