

Fill in the Blanks

Using the Quadratic Formula

Quadratic Equation	a, b and c	$b^2 - 4ac$	$x = \frac{-b + \sqrt{b^2 - 4ac}}{2a}$	$x = \frac{-b - \sqrt{b^2 - 4ac}}{2a}$	Solutions to 3sf
$x^2 + 5x + 1 = 0$	$a = 1, b = 5, c = 1$	$5^2 - 4 \times 1 \times 1 = 21$	$x = \frac{-5 + \sqrt{21}}{2}$	$x = \frac{-5 - \sqrt{21}}{2}$	$x = -0.209$ $x = -4.79$
$2x^2 + 5x + 1 = 0$	$a = 2, b = 5, c = 1$	$5^2 - 4 \times 2 \times 1 = 17$	$x = \frac{-5 + \sqrt{17}}{4}$	$x = \frac{-5 - \sqrt{17}}{4}$	$x = -0.219$ $x = -2.28$
$2x^2 - 5x + 1 = 0$	$a = 2, b = -5, c = 1$	$(-5)^2 - 4 \times 2 \times 1 = 17$	$x = \frac{5 + \sqrt{17}}{4}$	$x = \frac{5 - \sqrt{17}}{4}$	$x = 2.28$ $x = 0.219$
$x^2 - 7x + 3 = 0$	$a = 1, b = -7, c = 3$	$(-7)^2 - 4 \times 1 \times 3 = 37$	$x = \frac{7 + \sqrt{37}}{2}$	$x = \frac{7 - \sqrt{37}}{2}$	$x = 6.54$ $x = 0.459$
$2x^2 - 7x + 3 = 0$	$a = 2, b = -7, c = 3$	$(-7)^2 - 4 \times 2 \times 3 = 25$	$x = \frac{7 + \sqrt{25}}{4}$	$x = \frac{7 - \sqrt{25}}{4}$	$x = 3$ $x = 0.5$
$5x^2 + x - 2 = 0$	$a = 5, b = 1, c = -2$	$1^2 - 4 \times 5 \times -2 = 41$	$x = \frac{-1 + \sqrt{41}}{10}$	$x = \frac{-1 - \sqrt{41}}{10}$	$x = 0.540$ $x = -0.740$
$3x^2 + 5x + 2 = 0$	$a = 3, b = 5, c = 2$	$5^2 - 4 \times 3 \times 2 = 1$	$x = \frac{-5 + \sqrt{1}}{6}$	$x = \frac{-5 - \sqrt{1}}{6}$	$x = -\frac{2}{3}$ $x = -1$
$2x^2 + 9x - 1 = 0$	$a = 2, b = 9, c = -1$	$9^2 - 4 \times 2 \times -1 = 89$	$x = \frac{-9 + \sqrt{89}}{4}$	$x = \frac{-9 - \sqrt{89}}{4}$	$x = 0.108$ $x = -4.61$