

# Fill in the Blanks

# More Quadratic Expressions and Equations

Quadratic in the form $f(x) = ax^2 + bx + c$	Quadratic in factorised form	Quadratic in completed square form	Solutions to quadratic equation $f(x) = 0$
$f(x) = 4x^2 + 16x + 7$	$f(x) = (2x + 7)(2x + 1)$	$f(x) = 4(x + 2)^2 - 9$	$x = -\frac{7}{2}, x = -\frac{1}{2}$
$f(x) = 4x^2 - 4x - 3$	$f(x) = (2x - 3)(2x + 1)$	$f(x) = 4\left(x - \frac{1}{2}\right)^2 - 4$	$x = \frac{3}{2}, x = -\frac{1}{2}$
$f(x) = 2x^2 + 8x$	$f(x) = 2x(x + 4)$	$f(x) = 2(x + 2)^2 - 8$	$x = 0, x = -4$
$f(x) = 3x^2 + 10x - 8$	$f(x) = (3x - 2)(x + 4)$	$f(x) = 3\left(x + \frac{5}{3}\right)^2 - \frac{49}{3}$	$x = \frac{2}{3}, x = -4$
$f(x) = 2x^2 - x - 3$	$f(x) = (2x - 3)(x + 1)$	$f(x) = 2\left(x - \frac{1}{4}\right)^2 - \frac{25}{8}$	$x = \frac{3}{2}, x = -1$
$f(x) = 3x^2 + 7x + 2$	$f(x) = (3x + 1)(x + 2)$	$f(x) = 3\left(x + \frac{7}{6}\right)^2 - \frac{25}{12}$	$x = -\frac{1}{3}, x = -2$
$f(x) = 8x^2 - 6x - 9$	$f(x) = (2x - 3)(4x + 3)$	$f(x) = 8\left(x - \frac{3}{8}\right)^2 - \frac{81}{8}$	$x = \frac{3}{2}, x = -\frac{3}{4}$
$f(x) = 4x^2 + 4px - 3p^2$	$f(x) = (2x - p)(2x + 3p)$	$f(x) = 4\left(x + \frac{p}{2}\right)^2 - 4p^2$	$x = \frac{p}{2}, x = -\frac{3p}{2}$