



# Fill In The Blanks...



## Solving Harder Quadratic Inequalities

Quadratic Inequality	Rearrange	Factorise	Critical Values	Sketch and Shade	Solution
$x^2 < 7x - 12$	$x^2 - 7x + 12 < 0$	$(x - 4)(x - 3) < 0$	$x = 4,$ $x = 3$		$3 < x < 4$
$3x^2 + 5 \geq 16x$	$3x^2 - 16x + 5 \geq 0$	$(3x - 1)(x - 5) \geq 0$	$x = \frac{1}{3},$ $x = 5$		$x \leq \frac{1}{3}, x \geq 5$
$x^2 > 3x$	$x^2 - 3x > 0$	$x(x - 3) > 0$	$x = 0,$ $x = 3$		$x < 0, x > 3$
$2x^2 < 6 + 11x$	$2x^2 - 11x - 6 < 0$	$(2x + 1)(x - 6) < 0$	$x = -\frac{1}{2},$ $x = 6$		$-\frac{1}{2} < x < 6$
$\frac{4x^2 + 5x}{3} \leq 2$	$4x^2 + 5x - 6 \leq 0$	$(4x - 3)(x + 2) \leq 0$	$x = \frac{3}{4},$ $x = -2$		$-2 \leq x \leq \frac{3}{4}$