

Fill in the Blanks

Factorising Harder Quadratics ($ax^2 + bx + c$)

Quadratic	$a \times c$	\times to give ac + to give b	Split the middle term	Group and Factorise	Factorised Quadratic
$2x^2 + 7x + 6$	12	+4, +3	$2x^2 + 4x + 3x + 6$	$2x(x + 2) + 3(x + 2)$	$(2x + 3)(x + 2)$
$3x^2 + 19x + 6$	18	+18, +1	$3x^2 + 18x + x + 6$	$3x(x + 6) + 1(x + 6)$	$(3x + 1)(x + 6)$
$8x^2 + 6x - 9$	-72	+12, -6	$8x^2 + 12x - 6x - 9$	$4x(2x + 3) - 3(2x + 3)$	$(4x - 3)(2x + 3)$
$5x^2 + 12x - 9$	-45	+15, -3	$5x^2 + 15x - 3x - 9$	$5x(x + 3) - 3(x + 3)$	$(5x - 3)(x + 3)$
$9x^2 - 9x - 10$	-90	-15, +6	$9x^2 - 15x + 6x - 10$	$3x(3x - 5) + 2(3x - 5)$	$(3x + 2)(3x - 5)$
$6x^2 + x - 5$	-30	+6, -5	$6x^2 + 6x - 5x - 5$	$6x(x + 1) - 5(x + 1)$	$(6x - 5)(x + 1)$
$8x^2 - 18x + 7$	+56	-14, -4	$8x^2 - 14x - 4x + 7$	$2x(4x - 7) - 1(4x - 7)$	$(2x - 1)(4x - 7)$
$4x^2 - 12x + 5$	+20	-10, -2	$4x^2 - 10x - 2x + 5$	$2x(2x - 5) - 1(2x - 5)$	$(2x - 1)(2x - 5)$
$6x^2 + 17x + 5$	+30	+15, +2	$6x^2 + 15x + 2x + 5$	$3x(2x + 5) + 1(2x + 5)$	$(3x + 1)(2x + 5)$
$12x^2 + 7x - 10$	-120	-8, +15	$12x^2 - 8x + 15x - 10$	$4x(3x - 2) + 5(3x - 2)$	$(4x + 5)(3x - 2)$
$10x^2 - 3x - 4$	-40	+5, -8	$10x^2 + 5x - 8x - 4$	$5x(2x + 1) - 4(2x + 1)$	$(5x - 4)(2x + 1)$