

Harder Completing the Square

Write each of these expressions in the form $a(x + b)^2 + c$

(a)	(b)	(c)	(d)
$2x^2 + 4x + 1$ $= 2[x^2 + 2x] + 1$ $= 2[(x + 1)^2 - 1] + 1$ $= 2(x + 1)^2 - 2 + 1$ $=$	$2x^2 + 8x - 5$ $= 2[x^2 + 4x] - 5$ $= 2[(x + 2)^2 - 4] - 5$ $=$	$2x^2 - 12x + 9$ $= 2[x^2 - 6x] + 9$ $=$	$3x^2 - 6x + 4$ $= 3[x^2 - 2x] + 4$ $=$
(e)	(f)	(g)	(h)
$2x^2 - 8x + 3$	$3x^2 + 12x - 2$	$2x^2 + 2x + 11$	$3x^2 - 9x - 7$
Write each of these expressions in the form $a - b(x + c)^2$			
(i)	(j)	(k)	(l)
$5 - 4x - 2x^2$ $= -2x^2 - 4x + 5$ $= -2[x^2 + 2x] + 5$ $=$	$7 + 8x - 2x^2$	$14 - 6x - 3x^2$	$9 - 12x - 2x^2$