

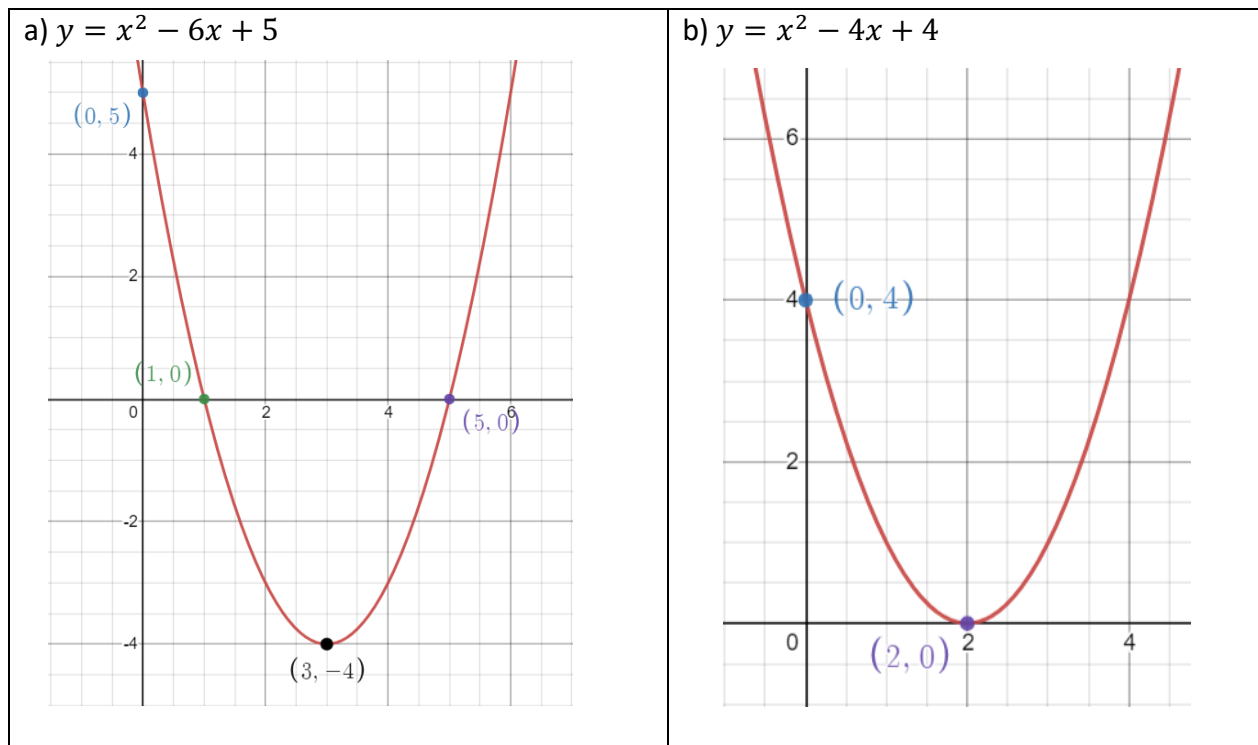
GCSE 7+ Session 4 Solutions
Independent Practice
Quadratic graphs

Revise, refresh, recall the core knowledge and skills:

1)

Equation of graph	y-intercept	Factorisation	x-intercept(s)	Complete the square	Vertex / turning pt
$y = x^2 - 6x + 8$	(0, 8)	$y = (x - 2)(x - 4)$	(2, 0) and (4, 0)	$y = (x - 3)^2 - 1$	(3, -1)
$y = x^2 - 6x + 5$	(0, 5)	$y = (x - 1)(x - 5)$	(1, 0) and (5, 0)	$y = (x - 3)^2 - 4$	(3, -4)
$y = x^2 + 4x - 12$	(0, -12)	$y = (x + 6)(x - 2)$	(2, 0) and (-6, 0)	$y = (x + 2)^2 - 16$	(-2, -16)
$y = x^2 - 4x - 21$	(0, -21)	$y = (x + 3)(x - 7)$	(-3, 0) and (7, 0)	$y = (x - 2)^2 - 25$	(2, -25)
$y = x^2 - 4x + 4$	(0, 4)	$y = (x - 2)^2$	(2, 0) only	$y = (x - 2)^2$	(2, 0)
$y = x^2 - 4$	(0, -4)	$y = (x - 2)(x + 2)$	(-2, 0) and (2, 0)	$y = x^2 - 4$	(0, -4)

2)



3)

Equation of graph	y-intercept	Factorisation	x-intercept(s)	Partial factorisation	Vertex / turning pt
$y = x^2 - 8x + 7$	(0, 7)	$y = (x - 1)(x - 7)$	(1, 0) and (7, 0)	$y = x(x - 8) + 7$	(4, -9)
$y = x^2 - 2x - 35$	(0, -35)	$y = (x - 7)(x + 5)$	(-5, 0) and (7, 0)	$y = x(x - 2) - 35$	(1, -36)
$y = x^2 - 3x - 10$	(0, -10)	$y = (x - 5)(x + 2)$	(-2, 0) and (5, 0)	$y = x(x - 3) - 10$	(1.5, -12.25)
$y = x^2 + 5x - 24$	(0, -24)	$y = (x + 8)(x - 3)$	(-8, 0) and (3, 0)	$y = x(x + 5) - 24$	(-2.5, -30.25)
$y = -x^2 + 4x + 5$	(0, 5)	$y = (-x + 5)(x + 1)$	(-1, 0) and (5, 0)	$y = -x(x - 4) + 5$	(2, 9)

4)

