

Quadratic Sequences Mark Scheme		
1(a)	27	[1]
1(b)	38	[1]
1(c)	7, 0, -5, -8, -9	[1] ( $x^2 - 10x + 16$ )
2(a)	-3,	[1] Correct first term
	-3, 6, 17, 30, 45	[1] All 5 terms correct
2(b)	<i>Yes, 765 is the 25th term in the sequence</i>	[1]
3(a)	$a = 1$	[1] – Correct a value
	$x^2 + 3x + c$	[1] - Correct b value
	$x^2 + 3x + 10$	[1] – Correct answer
3(b)	$a = 1$	[1] – Correct a value
	$x^2 - 3x + c$	[1] - Correct b value
	$x^2 - 3x + 2$	[1] – Correct answer
3(c)	$a = 1$	[1] – Correct a value
	$x^2 - 2x + c$	[1] - Correct b value
	$x^2 - 2x + 5$	[1] – Correct answer
3(d)	$a = -1$	[1] – Correct a value
	$-x^2 - 3x + c$	[1] - Correct b value
	$-x^2 - 3x + 102$	[1] – Correct answer

Turn over ►

<b>4(a)</b>	$a = 1$	[1] – Correct a value
	$x^2 + x + c, c = 0$	[1] - Correct band c value
	$x^2 + x$	[1] – Correct answer
<b>4(b)</b>	$a = 2$	[1] – Correct a value
	$2x^2 + x + c, c = 0$	[1] - Correct b value
	$2x^2 + x$	[1] – Correct answer
<b>4(c)</b>	$a = 1$	[1] – Correct a value
	$x^2 + 2x + c$	[1] - Correct b value
	$x^2 + 2x - 3$	[1] – Correct answer
<b>4(d)</b>	$a = 1$	[1] – Correct a value
	$x^2 + 5x + c$	[1] - Correct b value
	$x^2 + 5x - 5$	[1] – Correct answer
<b>5</b>	When $n = 1$ , $1^2 - 1 + 5 = x$ $x = 5$	[1]
	When $n = 2$ $2^2 - 2 + 5 = (x + y)$ $2^2 - 2 + 5 = (5 + y)$ $y = 2$	[1]

END