

Q	Marking Instructions	AO	Marks	Typical Solution
10(a)	States $\frac{dy}{dx} = 0$ at a turning point OE	2.4	E1	At a turning point $\frac{dy}{dx} = 0$
	Substitutes $x = -1$ into $\frac{dy}{dx} = 0$	3.1a	M1	$3x^2 - 12x + c = 0$
	Obtains correct value for c	1.1b	A1	$c = -15$
	Obtains $x = 5$ at other turning point	1.1b	A1	Integrate to find y
	Integrates to find y , at least one term correct and substitutes point $(-1, 1)$ into their integrated expression to find 'their' k	3.1a	M1	$y = x^3 - 6x^2 - 15x + k$
	Obtains correct y coordinate	1.1b	A1	$1 = -1 - 6 + 15 + k$
	Subtotal		6	$k = -7$
10(b)	Obtains lower inequality condone inclusion of equality	1.1b	B1	$x < -1$ and $x > 5$
	Obtains upper inequality condone inclusion of equality	1.1b	B1	
	Subtotal		2	
	Question Total		8	