

Question	Scheme	Marks	AOs
10(a)		B1 B1	1.1b 1.1b
		(2)	
(b)	$3x - 2a = x + a \Rightarrow x = \dots$ or $3x - 2a = -x - a \Rightarrow x = \dots$ $3x - 2a = x + a \Rightarrow x = \dots$ and $3x - 2a = -x - a \Rightarrow x = \dots$ $x = \frac{a}{4}, \frac{3a}{2}$ $\frac{a}{4} \leq x \leq \frac{3a}{2}$	M1 M1 A1 A1	1.1b 2.1 1.1b 2.5
		(4)	
(c)	Maximum value is $5a$ $x = \frac{3a}{2} \Rightarrow y = 5a - \left \frac{1}{2}a - \frac{3a}{2} \right = \dots$ $4a \leq g(x) \leq 5a$	B1 M1 A1	2.2a 3.1a 1.1b
		(3)	
		(9 marks)	

Notes

- (a)
 B1: V shape
 B1: Fully correct sketch including intercepts
 (b)
 M1: Attempts to solve one of the equations shown
 M1: Considers both possible cases and attempts to solve both of the equations shown
 A1: Correct values
 A1: Correct range using the correct notation
 (c)
 B1: Deduces the maximum value
 M1: Uses the upper limit from part (b) to find the minimum value
 A1: Correct range