QUESTION NUMBER	SCHEME	MARKS
6(a)	A to B : $V^2 = 24^2 + 2(-g)(-2.5)$	M1 A1
	OR: e.g. $0 = 24^2 - 2gh$ and $V^2 = 2g(h+2.5)$ oe	
	$V = 25$	A1
		(3)
6(b)	Some possible equations in t: $25 = -24 + gt$ $2.5 = \frac{(25+(-24))t}{2}$ $2.5 = -24t + \frac{1}{2}gt^2$ $2.5 = 25t - \frac{1}{2}gt^2$ Or they may find t_{UP} $\left(\frac{24}{g}\right)$ and t_{DOWN} $\left(\frac{25}{g}\right)$ AND add	M1 A1
	$t = 5$ (s)	A1
		(3)
6(c)	From A to C: $10 = 24t + \frac{1}{2}(-g)t^2$	M1 A1
	Complete method to find the required time: e.g. solving the above quadratic and finding the positive difference in the roots **N.B.** Allow this mark if they solve their quadratic, and give the answer as a range of values: t_1 ,, t ,, t_2	M1
	4, 4.0 or 3.98 (s)	A1
	ALT 1: From A to C: $W^2 = 24^2 - 2\times 10g$	M1A1
	$0 = W - g(\frac{1}{2}t)$	M1
	4.0 or 3.98 (s)	A1
	ALT 2: From A to C: $W^2 = 24^2 - 2\times 10g$	M1A1
	$0 = Wt + \frac{1}{2}(-g)t^2$	M1
	4.0 or 3.98 (s)	A1
		(4)