Question Number	Scheme	Marks	Notes
7a	EPE at $B = \dfrac{18Mg\times(2a)^2}{5\times 6a}$	M1	Correct form for EPE seen or implied. Allow if correct formula stated but slip in substitution.
	Work-energy equation	M1	Need all terms. Dimensionally correct. Condone sign errors
	$Mg\times 2a+\dfrac{1}{2}Mv^2=\dfrac{18Mg\times(2a)^2}{5\times 6a}$	A1	Correct unsimplified equation
	$v=\sqrt{\dfrac{4ag}{5}}$	A1	Accept exact equivalent or $0.89\sqrt{ag}$ or better
		(4)	
7b	Work-energy equation	M1	Need all terms. Dimensionally correct. Condone sign errors.
	$\dfrac{18Mg\times 4a^2}{5\times 6a}=Mg(2a+x)+\dfrac{18Mg\times x^2}{5\times 6a}$ or $\dfrac{1}{2}M\times their\dfrac{4ag}{5}=Mgx+\dfrac{18Mg\times x^2}{5\times 6a}$ $(3x^2+5ax-2a^2=0)$	A1 A1	Unsimplified equation in one unknown length with at most one error Correct unsimplified equation in one unknown length
	$x=\dfrac{a}{3}\Rightarrow$ distance from $A=\dfrac{8a}{3}$	A1	$2.7a$ or better
		(4)	
		[8]	