Question Number	Scheme	Marks
3	$\Delta\text{GPE} = 2g \times 0.7 \sin 30 \left(= 6.86\right)$	B1
	For a correct EPE term	B1
	$WD = 2g \cos 30 \times 0.3 \times 0.7 \left(= 3.56\right)$	M1A1
	$\frac{12\left(0.5\right)^2}{2 \times 0.8} + 6.86 = \frac{12\left(0.2\right)^2}{2 \times 0.8} + 0.7 \times 5.09 + \frac{1}{2} \times 2v^2$	M1A1
	$v^2 = 4.87 \Rightarrow v = 2.21 \left(\text{ms}^{-1}\right) \quad (2.2)$	A1
		[7]

B1 Correct unsimplified change in GPE.

B1 For a correct EPE term $\frac{12\left(0.5\right)^2}{2 \times 0.8}$ **or** $\frac{12\left(0.2\right)^2}{2 \times 0.8}$

M1 Complete method to find Work Done.

A1 Correct unsimplified expression for Work Done.

M1 Forming an energy equation. Must have 2 EPE terms, change in GPE, WD and KE. Must be dimensionally correct, but follow through their GPE and WD and condone missing half in EPE terms.

A1 Fully correct (unsimplified) equation.

A1 2.21 or 2.2 **cao**

Note: answers using constant acceleration score no marks.