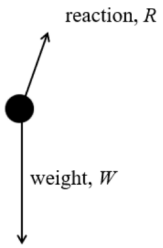
Question Number	Answer		Mark
13(a)	Vertical downwards force labelled "weight", or *W*. Force perpendicular to slope labelled "reaction", "(normal) contact", or *R* or *N*.  	**(1)** **(1)**	**2**
13(b)(i)	Resolves acceleration along slope. Acceleration = 1.2 (m s^{-2}) <u>Example of calculation</u> a = 9.81 m s^{-2} × sin 6.9° = 1.18 m s^{-2}	**(1)** **(1)**	**2**
13(b)(ii)	**Either** Use of $v^2 = u^2 + 2as$ Final speed = 12 m s^{-1} (ecf from (i)) **Or** Use of $E_k = ½mv^2$ and $\Delta E_{grav} = mg\Delta h$ Final speed = 12 m s^{-1} (ecf from (i)) <u>Example of calculation</u> $v^2 = 0^2 + 2 \times 1.18$ m $s^{-2} \times 60$ m $v = \sqrt{(0 + 2as)} = \sqrt{(2 \times 1.18 \text{ m s}^{-2} \times 60 \text{ m})} = 11.9$ m s^{-1}	**(1)** **(1)** **(1)** **(1)**	**2**
13(b)(iii)	Use of $v = u + at$ or another valid *suvat* equation Time = 10 s (ecf from (ii)) (ecf from (i)) <u>Example of calculation</u> $v = u + at$, $u = 0$ 11.9 = 0 + 1.18 m $s^{-2} \times t$ t = 11.9 m s^{-1} ÷ 1.18 m s^{-2} = 10.1 s	**(1)** **(1)**	**2**
	Total for question 13		**8**