Question Number	Scheme	Marks
8(a)	$1.4^2 = 2a \times 0.5 \Rightarrow a = 1.96 \text{ ms}^{-2}$ $3g - T = 3a \text{ or } -3a$ $T = 23.5 \text{ N or } 24 \text{ N}$	M1 A1 M1 A1 A1 (5)
(b)	$F = \mu R$ $R = 2g\cos\alpha$ $T - 2g\sin\alpha - F = 2a \text{ or } -2a$ $\mu = 0.5$	B1 M1 A1 M1 A1 A1 **DM**1 A1 (8) **13**
	Notes	
8(a)	First M1 for using one or more *suvat* formulae to produce an equation in a only First A1 for 1.96 (or -1.96 but only if correctly used in the second equation, in which case they *could* score 5/5) Second M1 for resolving vertically for Q (correct no. of terms but condone sign errors) Second A1 for a correct equation provided a used consistently in their two equations (but a does not need to be substituted) **N.B.** If they haven't found a value for a, the A1 can be scored for either $3a$ or $-3a$ in the equation of motion. Third A1 for 23.5 or 24	
(b)	B1 for $F = \mu R$ seen First M1 for resolving perpendicular to the plane (correct no. of terms with $2g$ resolved) First A1 for a correct equation (M1A0 for $R = mg\cos\alpha$) Second M1 for resolving parallel to the plane (correct no. of terms with $2g$ resolved but condone sign errors) Second A1 and third A1 for a correct equation (A1A0 for one error) N.B. Neither T nor F nor a needs to be substituted. Third M1 dependent on both previous M marks, for solving for μ(a *numerical* value) Fourth A1 for $\mu = 0.5$ (A0 for 0.499)	