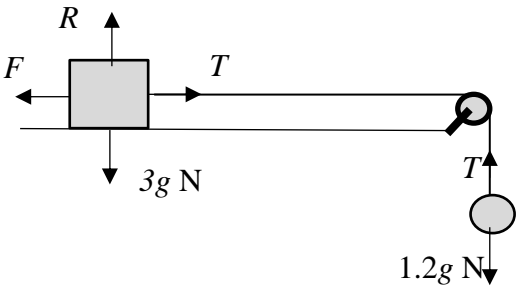


Question			Answer	Marks	AO	Guidance
11	(a)			B1	3.3	Both forces on the sphere correct and labelled
				B1	3.3	All forces correct on the block. Tension must be marked the same or if T_1 and T_2 used, equated to each other elsewhere in the question. The horizontal force F must be in the correct direction
				[2]		
11	(b)		For the system to be in equilibrium sphere gives $T = 1.2g$ N for the block $F = T = 1.2g = 11.76$	M1	1.1b	soi
				A1	1.1b	any form
				[2]		
11	(c)		$1.2g - T = 1.2a$	B1	3.4	cao
				[1]		
11	(d)		For the block $T = 3a$ Add the equations $1.2g = 4.2a$ $a = 2.8 \text{ ms}^{-2}$ Substitute $T = 3a = 8.4$	M1	1.1a	Attempt to solve simultaneous equations leading to a value for a . Do not award if their equation 11(c) does not have T .
				A1	1.1b	Cao. Allow $\frac{6}{7}g$
				[2]		