

Question			Answer	Marks	AO	Guidance	
10	(a)			B1	1.2	All three forces added correctly – need not be labelled	Extra forces is B0
				[1]			
10	(b)		$F = 15 \cos \theta$ $R = 15 \sin \theta + 50$ $15 \cos \theta \leq \frac{1}{5}(15 \sin \theta + 50)$ $15 \cos \theta - 3 \sin \theta \leq 10$	B1	3.3	Not for just seeing the expression $15 \cos \theta$	
				M1	3.3	M1 for resolving vertically – allow sign errors and sin/cos confusion (three terms)	Condone inclusion of g with the 50 for the M mark only
				A1	1.1		
				M1	3.4	Use of $F \leq \frac{1}{5} R$ with their F and $R \neq 50$	Allow $F = \frac{1}{5} R$ for the M mark only
				A1	2.2a	AG	
				[5]			