

10	(i)		$T - 3g = 3a$	M1*	3.3	Attempt N2L for $P$ and $Q$ – three terms, mass required, condone sign errors	M0 for $a = 0$ or $\pm g$
			$5g - T = 5a$	A1	1.1		
			$5g - T = 5\left(\frac{T - 3g}{3}\right) \Rightarrow T = \dots$	Dep*M1	1.1	Eliminate $a$ and attempt to solve for $T$	
			$T = 36.75 \text{ (N)}$	A1	1.1	Accept $\frac{15}{4}g$ , 36.8	
				[4]			
	(ii)		$a = 2.45 \text{ ms}^{-2}$	B1	3.4	0.25g	M0 for $a = 0$ or $\pm g$ $a = \pm g$
			$v^2 = 0 + 2(2.45)(2.5)$	M1*	3.3	Use of $v^2 = u^2 + 2as$ for $P$ with $u = 0$	
			$0 = 12.25 + 2h(-g)$	Dep*M1	3.3	Use of $v^2 = u^2 + 2as$ for $P$ with $v = 0$	
			$(2h =) 1.25 \text{ (m)}$	A1	1.1	oe	
				[4]			