Question Number	Answer	Mark	Additional Guidance
2a	M(A)	M1	Or equivalent to obtain an equation in T. Dimensionally correct. Condone sin/cos confusion
	$T \times 3a\sin\theta° = Mg \times \frac{3a}{2}\cos(2\theta°)$	A1	Correct unsimplified equation. Allow consistently cancelled a
	$\Rightarrow \text{tension} = \frac{Mg\cos(2\theta°)}{2\sin\theta°}$ *	A1*	Obtain **given answer** from correct working. Withold if length a never seen in working.
		(3)	
2b	Extension in the string $= 2 \times 3a\cos\theta°$	B1	Or for finding BC E.g. $\sqrt{18a^2(1+\cos 2\theta°)}$ E.g. $\frac{3a\sin 2\theta°}{\sin\theta°}$
	$T = \frac{\frac{2}{5}Mg \times "6a\cos\theta°"}{3a}$	M1	Correct use of Hooke's Law for their extension in terms of a and $\theta/2\theta$ (must be an extension: $BC \pm 3a$ is M0)
	Form an equation in either 2θ or θ	M1	e.g. $\frac{4}{5}Mg \times \sin(2\theta°) = Mg\cos(2\theta°)$
	$\tan 2\theta° = \frac{5}{4}$ *	A1*	Obtain **given answer** from correct working. Condone missing degrees symbol.
		(4)	
		(7)	