Question Number	Scheme	Marks	
2.	$F\cos\alpha = mg$	M1	A1
	$F\sin\alpha = T$		A1
	$T = \frac{2mgx}{l}$ or $T = \frac{2mg(AB-l)}{l}$	M1	
	$\frac{3}{4}mg = \frac{2mgx}{l}$	dM1	
	$AB = \frac{11l}{8}$	A1	
			(6)

Notes	
M1	Resolve vertically or horizontally, correct no. of terms, condone sign errors and sin/cos confusion (or use trig on a right-angled triangle of forces)
A1	Correct vertical equation
A1	Correct horizontal equation (A2 for $T = mg\tan\alpha$ from triangle of forces)
M1	Hooke's Law. Must clearly be an extension and not *AB*. Since *x* is not defined in the question, other extensions may be used including ($AB - l$) or xl where *x* is found to be the constant $\frac{3}{8}$.
dM1	Substitute trig (not necessarily correctly) to produce an equation in '*x*' (and *l*) only, dependent on previous M's and on having two equations.
A1	Cao Accept 1.375*l* , 1.4*l*, 1.38*l*