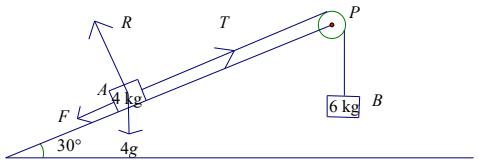
6(a)			
	$R = 4g\cos 30°$	B1	
	$F = \frac{1}{\sqrt{3}}R\left(=2g\right)$	M1	Use of $F = \mu R$
	Work done $= 1.5F$	M1	Independent. Correct method for work done seen or implied. Allow without a value for F found
	$= 3g$ or 29.4 (J) or 29 (J)	A1	Not $\frac{147}{5}$
		(4)	
6(b)	PE lost by B − PE gained by A	M1	Dimensionally correct. Condone sin/cos confusion and sign errors.
	$= 6g\times 1.5 - 4g\times 1.5\sin 30°$	A1	Correct unsimplified expression. Allow $\pm\left(6g\times 1.5 - 4g\times 1.5\sin 30°\right)$
	$= 6g$ or 58.8 (J) or 59 (J)	A1	
		(3)	
6(c)	Work energy equation	M1	Q asks for work-energy. Need all terms. Dimensionally correct. Condone sign errors.
	$\frac{1}{2}\times 4v^2 + \frac{1}{2}\times 6v^2 + 3g = 6g$	A1ft	Correct unsimplified equation. Follow their (a) and (b). $\frac{1}{2}\times 10v^2 + \text{their}(a) = \text{their}(b)$ or starting afresh
	$5v^2 = 3g \Rightarrow v = \sqrt{\frac{3g}{5}}$ or 2.42 $\left(\text{m s}^{-1}\right)$ or 2.4 $\left(\text{m s}^{-1}\right)$	A1	not $\frac{7\sqrt{3}}{5}$
		(3)	
		[10]	