

Question	Answer	Marks	Guidance
(a)	$F - 30 = 70 \times 0.3$	M1	Use of Newton's Second law
	$P = 4F$	B1	Using $P = Fv$
	$[= 51 \times 4] = 204 \text{ W}$	A1	
		3	
(b)	Change in KE = $\frac{1}{2} \times 70 \times 12^2 - \frac{1}{2} \times 70 \times 6^2$	M1	
	3780 J	A1	
		2	
(c)	For work energy equation	M1	
	$70g \times d \sin 5 - 30d = 3780$	A1 FT	FT change in kinetic energy from (b)
	$d = 122$	A1	
		3	

