Q	Solution	Mark	Notes
1	Driving force $\left(F\right)=\dfrac{3500}{V}$	B1	Use of $P=Fv$
	Equation of motion: $F-20V+480g\sin\theta=0$	M1	Need all terms. Dimensionally correct. Condone sign errors and sin/cos confusion
	$\dfrac{3500}{V}-20V+40g=0$	A1	Correct unsimplified equation in V.
	$20V^2-392V-3500=0$	M1	Form a 3 term quadratic equation $\left(=0\right)$ in V
	$V=26.3$ (26)	A1	3 sf or 2 sf Not $\dfrac{49+22\sqrt{14}}{5}$ (follows use of 9.8)
		(5)	
		[5]	