Question Number		Mark	Note
	Use the mass to determine which part of the system is being considered.		
1a	Equation of motion for the car and trailer or for each **with** T eliminated	M1	Need all terms. Dimensionally correct. M0 if they use power as a force. Condone sign errors.
	$F-350-200=(500+150)a$	A1	Correct unsimplified equation in F and a
	Use of $(F=)\ \frac{10500}{14}\ (=750)$ seen	M1	Independent M0 for just $14F = 10500$, with no subsequent working.
	$a=\frac{4}{13}$	A1	Accept 0.31 or better. 0.30769……
		[4]	
1b	Equation of motion for the car or the trailer to give an equation in T and a only.	M1	Need all relevant terms. Dimensionally correct. M0 if they use power as a force. Condone sign errors.
	$T-200=150\times\ '\frac{4}{13}'$ or $750-350-T=500\times\ '\frac{4}{13}'$	A1**ft**	Correct unsimplified equation, follow their a.
	$T=\frac{3200}{13}$	A1	Accept 250 or better 246.15338…….
		[3]	
		(7)	