

Question Number	Scheme	Marks
1(a)	For truck: $D - 600 - 400 = 2400 \times 0.5$ $D = 2200\text{N}$	M1 A1 A1 (3)
(b)	For both: $D - 600 = (M + 2400) \times 0.5$ (or trailer: $600 - 200 = M \times 0.5$) $M = 800$ $M = 800$	M1 A1 A1 (3)
(c)	Truck and trailer have same acceleration.	B1 (1) 7
	Notes Can mark (a) and (b) 'together' if it helps the candidate, provided no wrong working seen.	
1(a)	M1 for NL2 for truck only (or for a complete method if they find M first), with correct no. of terms, in D only. (M0 if 600 or 400 is replaced by 200) First A1 for a correct equation . Second A1 for 2200 (N). .	
1(b)	M1 for NL2 for whole system or trailer only, with correct no. of terms. First A1 for a correct equation. (Allow ' D ' or their D) Second A1 for 800. N.B. In both parts of this question use the mass which is being used in their equation to guide you as to which part of the system is being considered.	
1(c)	B0 if extras included. E.g if 'tension is same' is included. B1 Must include 'truck and trailer' or 'both particles' or 'accln is same throughout the system' B0 for 'accln is same'	