

Question		Answer	Marks	AO	Guidance
2	(a)		B1	1.1	Driving force and common tension correct and labelled. Allow $T_1$ and $T_2$ if later seen equated. Ignore any vertical forces shown. Also allow for common thrust.
			B1	1.1	Both resistances correct and labelled and no extra horizontal forces
			[2]		
2	(b)	N2L for system $6000 - 800 - 300 = 1800a$	M1	1.1a	Attempt to find resultant horizontal force. All forces included and no extras Allow sign errors.
			M1	1.1a	Attempts N2L equation with their total mass and their resultant. Do not allow for weight used instead of mass.
		$a = 2.72 \text{ m s}^{-2}$ (to 3 s.f.)	A1	1.1	cao
		<b>Alternative solution</b> N2L for car $6000 - 800 - T = 1400a$ N2L for trailer $T - 300 = 400a$	M1		Attempt at N2L for at least one part of the system Do not allow for weight used instead of mass. Allow sign errors. All forces included and no extras (Use the mass to determine which part of the system considered)
		Add equations to give $a = 2.72 \text{ m s}^{-2}$ (to 3 s.f.)	M1		Attempt to eliminate $T$ from their two equations
			A1		cao
			[3]		