Que	stion	Scheme	Marks	AOs
		<b>N.B.</b> Use the mass in the ' <i>ma</i> ' term of an equation to determine which part of the system (cage and block, cage or block) it applies to.		
4	(a)	Translate situation into the model and set up the <b>equation</b> of motion for the <u>cage and the block</u> to obtain an equation in $T$ only.	M1	3.3
		$T - 40g - 10g = 50 \times 0.2$	A1	1.1b
		500 (N) Must be positive	A1	1.1b
		Some examples: $T-50=50\times0.2$ and $T-40g-10g=50g\times0.2$ both score M1A0A0		
			(3)	
(	b)	Use the model to set up the equation of motion for the <u>block</u> to obtain an equation in $R$ only.	M1	3.4
		$R - 10g = 10 \times 0.2$ Allow - R instead of R	A1	1.1b
		100 (N) Must be positive.	A1	1.1b
		<b>OR:</b> Use the model to set up the equation of motion for the <u>cage</u> to obtain an equation in <i>R</i> only.	M1	3.4
		$T - 40g - R = 40 \times 0.2$ with their T substituted	A1	1.1b
		100 (N) Must be positive	A1	1.1b
			(3)	
(6				narks)
Notes: N.B. Only penalise the use of an incorrect value of <i>g</i> ONCE for the whole question, so max (a)M1A1A0(b)M1A1A1				
4a	M1	Correct number of terms, condone sign errors		
	A1	Correct equation in T only		
	A1	cao		
4b	M1	Correct number of terms, condone sign errors		
	A1	Correct equation in <i>R</i> only		
	A1	cao		