

9	(i)		25 N	B1 [1]	3.4	E		
9	(ii)		$2(100) = 75x + (x + 0.5)(25)$ $x = 1.875$	M1 A1ft A1 [3]	3.3 1.1 1.1	E C C	eg moments about <i>A</i> – correct number of terms Follow through their 25 only	
9	(iii)		$(x + 0.5 - 2)(100) = W(4 - 0.5 - x)$ $W = 23.1 \text{ N}$	M1 A1ft A1 [3]	3.3 1.1 1.1	E C A	moments about <i>D</i> – correct number of terms – oe (leading to an equation in <i>W</i>) Follow through their <i>x</i> only Accept 23 or better	23.076923...

Question			Answer	Marks	AO		Guidance	
9	(iv)	(a)	Modelling the stone as a particle assumes that the weight of the stone block acts exactly at B therefore the block's dimensions (or the distribution of the mass of the block) have not been taken into consideration	B1 [1]	3.5b	A	Accept 'uniform'	
9	(iv)	(b)	Modelling the plank as a rigid rod assumes that the plank remains in a straight line and does not bend	B1 [1]	3.5b	A		