

Question number			Answer	Accept	Reject	Marks
5	(a)	(i)	Substitution; Calculation; e.g. $m \times g = 0.454 \times 10$ $= 4.54 \text{ (N)}$			2
		(ii)	Centre of gravity;	Centre of mass;		1
	(b)	(i)	force upwards; from top of nail;	Near vertical by eye In line with F_2		2
		(ii)	Any two from: increase F_1 OR increase force (from hand); Increase d_1 OR increase distance of hand from pivot; Keep F_1 perpendicular to hammer;	use two hands use longer handle use longer hammer Ignore: references to d_2 distance from nail to pivot idea of bigger [rather than longer] hammer		2
					Total	7