Question number			Answer	Accept	Reject	Marks
5	(a)	(i)	Substitution; Calculation; e.g. m x g = 0.454 x 10 = 4.54 (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**

Question number			Answer	Accept	Reject	Marks
7	(a)		B			1
	(b)	(i)	Word equation or $V_p I_p = V_s I_s$;	$V_p/V_s = I_s/I_p$ or $V_s/V_p = I_p/I_s$ or $I_1V_1 = I_2V_2$		1
		(ii)	Correct equation substituted OR rearranged; Answer; Vp/Vs = Is/Ip or Vs/Vp = Ip/Is e.g. 230 x 0.25 = 12 x I_s , so I_s = (230 x 0.25) ÷ 12 = 4.8 (A)	Bald answer;; 4.79 (A) , 4.792 (A)		2
	(c)		Two of MP1 Idea of energy / power lost; MP2 Idea of efficiency ≠ 100%; MP3 Idea of less available energy/power/voltage/current; MP4 Idea of resistance increasing (with temperature);			2
					Total	**6**