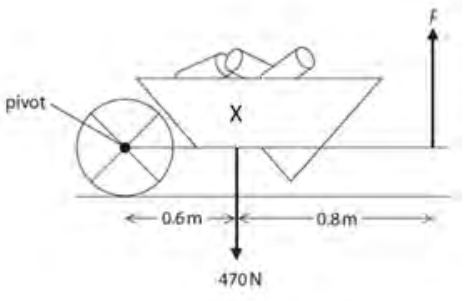
Question number	Answer	Notes	Marks
5 (a) (i)	work done = force × distance (moved);	Accept correct symbols e.g. W = F x d W = F x s	1
(ii)	substitution; evaluation; e.g. (work =) 140 × 39 5500 (J)	 5460	2
(iii)	same answer as 5(a)(ii)	allow 'the same'	1
(b) (i)	X in line with the weight arrow and vertically between the tail of the arrow and the top of the wheelbarrow (not including the logs);  	judge alignment with weight arrow by eye	1
(ii)	moment = force × (perpendicular) distance (from pivot);	condone M = F x d M = F x s	1
(iii)	principle of moments (stated or implied); total distance hand to pivot calculated; substitution showing either correct moment (or both); final rearrangement and evaluation; e.g. (total) clockwise (moment) = (total) anticlockwise (moment) (distance) = 0.6 + 0.8 = 1.4 m 470 × 0.6 = F × 1.4 F = 470 × 0.6 / 1.4 = 200 (N)	 accept 1.4 or 0.6 + 0.8 seen in working accept 282 seen in working allow 201, 201.43 350, 352, 353, 352.5 gets 2 marks	4

Total 10 marks