Question Number	Scheme	Marks
5(a)	Width = 7.2	B1
	Area of 21.6 for a frequency of 75 so $\frac{21.6}{75}\times 40 = 11.52$ for a frequency of 40 or $w \times h = 11.52$ or fd = 15	M1
	$\left[h = \frac{11.52}{7.2} \text{ or } \frac{2}{15}\times 12 =\right] 1.6$	A1
		(3)
(b)	$[Q_2 = 130+]\frac{5}{63}\times 10$ or $[Q_2 = 130+]\frac{5.5}{63}\times 10$ or $\frac{x-130}{140-130} = \frac{150-145}{208-145}$ or $\frac{140-x}{140-130} = \frac{208-150}{208-145}$	M1
	= awrt 130.8 or awrt 130.9	A1
		(2)
(c)(i)	$[\bar{y} =]\frac{6000}{300}[=20]$ and $[\bar{w} =] 2\times "20" + 200$	M1
	$= 240$	A1
		(2)
(c)(ii)	$[\text{Var}(y) =]\frac{150000}{300} - "20"^2 [= 100]$	M1
	$[\text{Var}(w) =] 4\times "100" = 400$	M1A1
		(3)

	Notes	Total 10
(a)	**B1**	7.2 or exact equivalent
	M1	for sight of 11.52 or $w \times h = 11.52$ or fd = 15 May be implied by $h = 1.6$
	A1	1.6 or exact equivalent
(b)	**M1**	for any valid method to find the median allow use of $n+1$ allow working backwards $[140 -]\frac{58}{63}\times 10$ or $[140 -]\frac{57.5}{63}\times 10$
	A1	awrt 130.8 allow awrt 130.9 if using $(n+1)$ No fractions
(c)(i)	**M1**	for a correct method to find the mean of w Alt: $\sum w = 6000\times 2 + 300\times 200 [= 72000]$ and $\bar{w} = \frac{"72000"}{300}$
	A1	cao correct answer is 2/2
(c)(ii)	**M1**	for a correct method to find Var(y) or for $\sum w^2 = 17\,400\,000$
	M1	for a correct method to find Var(w) ft their Var(y) $2\times "100" + 200 = 400$ is M0A0 or for $\text{Var}(w) = \frac{17\,400\,000}{300} - "240"^2$
	A1	cao answer only with no working shown scores M1M0A0
	SC	If no marks scored in (ii), allow M1(M0A0) for

		$\sqrt{\frac{150000}{300}-"20"^2}$