

Question			Answer	Mark	AO	Guidance
10	(a)		eg $120 \times \frac{6}{24}$ or $120 \times \frac{150}{600}$ = 30	M1 A1 [2]	3.1a 1.1	Attempt $120 \times \frac{\text{Area of 60-65 block}}{\text{Total area}}$, using any units (must see 120 used for this mark, but may be implied by ‘30’) cao
10	(b)	(i)	Attempt areas of other blocks 57.7 (3 sf) 6.20 (3 sf) Allow 6.2	M1 A1 A1 [3]	1.1 2.1 1.1	May be implied by $\bar{x} \in [55,60]$ OR $\sigma \in [5,7]$ OR $\sigma^2 \in [30,40]$ BC BC
10	(b)	(ii)	Distribution of masses in classes unknown	B1 [1]	3.2b	Not just “Because midpoints used.” Or “actual masses not known” or similar.

10	(c)		$57.7 - 2 \times 6.20$ = 45.3 or 45, hence 4 outliers	M1 A1ft [2]	2.1 2.2a	Attempting $\mu \pm 2\sigma$ Allow 4 outliers ft their values from (b)(i) but must be consistent Allow ‘whole classes’ or appropriate interpolation here (NB frequencies by class are: 4,10,20,22,20,30,14) Allow 14 from the sum of the first two classes (10+4)
10	(d)		Can obtain actual frequencies from histogram	B1 [1]	1.2	or similar; eg pie chart only shows relative frequencies or “histogram has figures while pie chart shows a percentage” Acceptable answers must be specific to the question (finding actual frequencies to estimate mean/standard deviation) Not just “show spread of data” or “easier to read” or “easier to see distribution” etc.