Qu	Scheme	Marks
1(a)	eg 60 people = 1.5 large squares/6 medium squares/150 small squares **or** eg 1 person = 0.025 large squares/0.6 medium squares/2.5 small squares **or** eg **[**1 small square **=]** 0.4 people/[1 medium square =] 10 people/[1 large square =] 40 people eg a correct f.d. eg 60/(20 – 10) [= 6] eg a correct frequency, 100, 70, 20, 24 associated with the appropriate bar	B1
	eg $\frac{8}{10}\times 20$ **or** $\frac{15}{30}\times 24$ **or** 8×2 **or** 0.8×15 **or** $\frac{40}{2.5}$ **or** $\frac{30}{2.5}$ **or** $8\times 5\times 0.4$ $2\times 15\times 0.4$ **or** 16 **or** 12 **or** 70×0.4	M1
	<u>28</u> people	A1
		(3)
(b)	$\text{Median} = [5]+\frac{5}{70}\times 37$ or $[10]-\frac{5}{70}\times 33$	M1
	= 7.642... **awrt 7.64**	A1
		(2)
(c)	$\sum \text{midpoint}\times\text{freq} = 2.5\times 100+7.5\times 70+15\times 60+25\times 20+45\times 24[=3255]$	M1
	$\text{Mean} = \frac{"3255"}{274}$	dM1
	= 11.879… **awrt 11.9**	A1
		(3)
	Notes	**Total 8**
(a)	B1: for finding a ratio between people and area. Allow just the numbers for 1 person or for 1 square ie 0.025, 0.6, 2.5, 0.4, 1.66 or 40 **or** calculating f.d. for any bar correctly, fd = 20, 14, 6, 2 or 0.8 Information may be seen on diagram. Must be clear it is a fd either by correct use, seen on axes associated with correct bar or stated as an fd. May be implied by M1	
	M1: for a correct method to find the number of people between 22 and 30 km **or** 30 and 45 km or between 22 and 45 km	
	A1: 28	
	NB An answer of 28 gains 3/3 unless from obvious incorrect working	
(b)	M1: Allow equivalent for $n+\frac{5}{70}\times 37$ or $\frac{Q_2-n}{5}=\frac{137-100}{170-100}$ or $n-\frac{33}{70}\times 5$ or $\frac{n-Q_2}{5}=\frac{170-137}{170-100}$ oe Allow alternative methods eg $\frac{Q_2-5}{10-Q_2}=\frac{137-170}{170-137}$ Allow 37.5 for 37, 137.5 for 137, 32.5 for 33	
	A1: awrt 7.64 or $\frac{107}{14}$ or allow **awrt 7.68** or $\frac{215}{28}$ if using n + 1 Allow awrt 7640 m or 7680 m but must have units.	
(c)	M1: Attempt at correct expression for $\sum \text{midpoint}\times\text{freq}$ - at least 3 products with correct midpoints added with at least 1 of these products fully correct . Allow for 3255	
	M1: dep on M1 being awarded for dividing "their sum" by 274	
	A1: awrt 11.9 or $\frac{3255}{274}$ Allow awrt 11900 m but must have units	