Question		orking	Answer	Mark	Notes	
12	(a)			2	M1	for at least 4 points plotted correctly at end of interval **or** for all points plotted consistently within each interval of the associated frequency table (eg at 2.5, 7.5, 12.5, 17.5, 22.5, 27.5 or 0, 5, 10, 15, 20, 25) at the correct height
		(NB: a 'bar chart' type graph scores zero marks)	correct cf graph		A1	All points plotted correctly at end of interval (tolerance 1 small square) and joined with a curve or line segments accept curve that is not joined at (0, 0).
	(b)	If answer is in the given range, then award the mark – unless from obvious incorrect working	10.5 to 12	1	B1ft	accept answer in range 10.5 – 12 or ft *their* cumulative frequency graph (must be an ascending graph) (allow 1 small square tolerance)
	(c)	NB: readings are 5.5 – 7 and 15.5- 17 (but for this M1 these do not have to be correct if correct working is shown – eg lines or marks indicating use of CF 20 (or 20.25)and CF 60 (or 60.75) with an indication on the Distance axis at the correct points (or they can just show the correct readings))		2	M1ft	For correct use of LQ and UQ, ft from a cum freq graph provided method is shown – eg a line horizontally to the graph from readings of CF 20 and CF 60 to meet the graph and then a vertical line to the Distance axis(even if wrongly read scale) **or** clear marks on the graph and Distance axis that correspond to the correct readings **or** correct values from the Distance axis
		If answer is in the given range, then award the marks – unless from obvious incorrect working	8.5 to 11.5		A1ft	Accept a single value in range 8.5 to 11.5 or ft from their cumulative frequency graph provided method is shown
	(d)	**not in context**: office *B* workers have a higher median than office *A* workers oe **in context**: office *B* workers [tend to] travel further oe		2	B1	ft comparison of medians e.g. Office *B* workers travel further [but if they have a wrong median then correct comparison of this with the 15 km] (Must compare to median in (b))
		not in context: the IQR for office *A* workers is bigger than the IQR for office *B* workers oe **in context**: The distances for the office *A* workers are more spread out/more varied oe			B1	ft comparison of IQR eg Office *A* distances are more spread (must compare to IQR in (c)) **NB: To award both marks at least one comparison must be in context**
						Total 7 marks