

Question			Answer	Marks	AO	Guidance
11	(a)	(i)	Train, because all increases over 50%	B1	2.2b	<p>Must specify Train and give a reason. Any sensible reason related to chart, e.g.:</p> <ul style="list-style-type: none"> • “Train has two of highest category and three of the 2nd highest” • May refer to colours (e.g. dark, darker, darkest)
11	(a)	(ii)	<p>The chart does not show where in the range each value is</p> <p>Or</p> <p>We do not know the (relative) sizes of each LA</p>	B1	2.3	<p>Any sensible reason relating to either ‘exact values’ or ‘actual/relative sizes of each LA’. Examples:</p> <ul style="list-style-type: none"> • “we do not know exact values because the data is grouped” B1 • “grouped” (without reference to exact values) B0 • “increases could be much higher than 90%” B1 • “low % of high number may be greater than high % of low number” B1 • “not all workers accounted for” B0 • “may be errors in data” B0 <p>NB throughout this question, do not credit reasons that don’t relate to the question or that attempt to criticise the data set (rather than the chart/presentation and reasoning from it).</p>
				[1]		
				[1]		

Question		Answer	Marks	AO	Guidance
11	(b)	Do not know the initial proportions of each mode of transport Do not know the exact % increases	B1 B1 [2]	2.3 2.4	Any 2 distinct correct reasons. Examples: <ul style="list-style-type: none"> • “% ranges are wide” B1 • “Do not know the upper limit for +90% PI” B1 • “Do not know values within -10 to +10%” B1 • “Do not know baseline values for each mode” B1 • “size of the LAs” (not relevant here) B0 Do not credit criticism of underlying data or grouping of modes of transport (e.g. walking/working from home) B0
11	(c)	(Small) changes in these small numbers will lead to large % increases (which may give a misleading impression of the overall trend).	B1 [1]	2.4	Must refer to numbers or absolute values, not just %, e.g.: <ul style="list-style-type: none"> • “actual increases small (so hard to see trend)” B1 • Do not credit references to grouped data / exact values here (not relevant) B0
11	(d)	Increase in D is 20% and in H is 40% $0.2D_{01} \approx 3.5 \times 0.4H_{01}$ $D:H$ is 7:1	M1 M1 A1 [3]	3.1a 1.1 2.2b	M1 for sight of midpoints: 20% and 40% <ul style="list-style-type: none"> • Allow 0.2 and 0.4 • Condone 1.2 and 1.4 Alternatively may see comparison of corresponding lower and upper bounds e.g. 10% \rightarrow 30% and 30% \rightarrow 50% (this leads to an estimate of 8.15) – M1 For setting up two expressions and correctly using 3.5 (must be on the correct side). Do not accept 1.2, 1.4 here (NB $3.5 \times 0.4 = 1.4$) Allow = instead of \approx Must be using two estimates for midpoints or considering both sets of lower/upper bounds Accept 3.5:0.5. If lower and upper bounds used, accept 8(.15):1 Need not be given as a ratio: accept $\frac{D_{01}}{H_{01}} \approx 7$ oe but not $D = 7H$ Note that 7:2 often comes from not using any information from the chart (M0M0A0)