| 14 | (a) | discard City of London (as part of the data not available)or discard any regions where one or more pieces of data are missing oe | B1 | 2.4 | LDS advantage do not allow if answer spoiled eg because it's an anomaly, eg because it's an outlier, |
|----|-----|---|----------|------------|--|
| | | | [1] | | |
| 14 | (b) | scatter does not look linear oe pmcc not close to 1 oe | B1 B1 | 3.4 3.4 | ignore extra comments unless they contradict an otherwise correct answer ignore extra comments unless they contradict an otherwise correct answer |
| | | | [2] | | |

| Question | Answer | Marks | AO | Guidance |
|---|---|---|--|---|
| (c) | $27216 \pm 2 \times 4177.5$ or $61.0 \pm 2 \times 5.32$ | M1 | 1.1 | use of 2 standard deviation check for one of the 4 calculations soi |
| | <i>m</i> < 18861 or <i>m</i> > 35 571 | A1 | 1.1 | allow \leq and \geq |
| | percentage < 50.36 or percentage > 71.64 | A1 | 1.1 | allow \leq and \geq |
| | | | | if M1A0A0 allow M1 SCB1 for all 4 correct values seen |
| | Scatter diagram to show Percentage of Pupils Achieving 5 A*-C Grades against Median Income of Taxpayers | A1 | 1.1 | |
| | 70.0 | | | |
| | 60.0 55.0 | | | |
| | 40.0 | | | |
| | 15000 20000 25000 30000 35000 40000 Median Income in £ | | | |
| | | | | |
| | | [4] | | |
| (d) | between 0 and 0.3743 since | B1 | 2.4 | |
| | eg outliers gave a false impression of linearity | | | |
| | eg scatter will be more like a circle | | | need to refer to the shape of the scatter oe |
| | | | | |
| | | [1] | | |
| | (c) | (c) $27216 \pm 2 \times 4177.5 \text{ or } 61.0 \pm 2 \times 5.32$ $m < 18861 \text{ or } m > 35 571$ percentage < 50.36 or percentage > 71.64 $\boxed{\int_{0}^{5A^*-C} \text{Grades against Median Income of Taxpayers}}$ $\underbrace{\int_{0}^{50} \frac{1}{40.0} \frac{1}{2000} $ | (c) $27216 \pm 2 \times 4177.5 \text{ or } 61.0 \pm 2 \times 5.32$ M1 $m < 18861 \text{ or } m > 35 571$ A1percentage < 50.36 \text{ or percentage > 71.64}A1Scatter diagram to show Percentage of Pupils Achieving $5 A^*-C$ Grades against Median Income of Taxpayers $\sqrt[750]{700}_{45.0}$ $\sqrt[750]{700}_{2000}$ A1M1M1M1M1M1M1M1M1M1M1M1M1M1M1M1M1Scatter diagram to show Percentage of Pupils Achieving $5 A^*-C$ Grades against Median Income of Taxpayers $\frac{\sqrt{700}}{\sqrt{900}}$ M1M1M1M1M2 <tr <td="" colspan="2">M2<th>(c)$27216 \pm 2 \times 4177.5 \text{ or } 61.0 \pm 2 \times 5.32$M11.1$m < 18861 \text{ or } m > 35571$A11.1percentage < 50.36 or percentage > 71.64A11.1Satter diagram to show Percentage of Pupils Achieving 5A*C Grades against Median Income of Taxpayers $\frac{56}{400} \frac{450}{2000} \frac{2000}{2000} \frac{2500}{2000} \frac{3000}{3500} \frac{3000}{4000} \frac{3500}{4000} \frac{400}{400} \frac{400}{400} \frac{11}{1000} \frac{11}$</th></tr> | (c) $27216 \pm 2 \times 4177.5 \text{ or } 61.0 \pm 2 \times 5.32$ M11.1 $m < 18861 \text{ or } m > 35571$ A11.1percentage < 50.36 or percentage > 71.64A11.1Satter diagram to show Percentage of Pupils Achieving 5A*C Grades against Median Income of Taxpayers $\frac{56}{400} \frac{450}{2000} \frac{2000}{2000} \frac{2500}{2000} \frac{3000}{3500} \frac{3000}{4000} \frac{3500}{4000} \frac{400}{400} \frac{400}{400} \frac{11}{1000} \frac{11}$ |
| (c) $27216 \pm 2 \times 4177.5 \text{ or } 61.0 \pm 2 \times 5.32$ M11.1 $m < 18861 \text{ or } m > 35571$ A11.1percentage < 50.36 or percentage > 71.64A11.1Satter diagram to show Percentage of Pupils Achieving 5A*C Grades against Median Income of Taxpayers $\frac{56}{400} \frac{450}{2000} \frac{2000}{2000} \frac{2500}{2000} \frac{3000}{3500} \frac{3000}{4000} \frac{3500}{4000} \frac{400}{400} \frac{400}{400} \frac{11}{1000} \frac{11}$ | | | | |