# 2.2 Statistics: Data Presentation and Interpretation: 10-minute Pack

Total Marks

EDEXCEL 9MA0 · Calculator allowed · about 10 minutes

Name: _____ Date: ____ / ____ / _____

**Answer ALL questions. Show all your working.**

**1** The masses, in kg, of a sample of lambs have lower quartile 34, median 42, upper quartile 49, smallest value 29 and largest value 94.

**(a)** Find the interquartile range. **(2)**

**(b)** A value is an outlier if it is more than 1.5 x IQR above the upper quartile or below the lower quartile. Determine whether the smallest value and the largest value are outliers. **(3)**

**(c)** Describe the skewness of the distribution, justifying your answer using the quartiles. **(2)**

**(Total for Question 1 is 7 marks)**


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# Mark scheme · 2.2 Statistics: Data Presentation and Interpretation: 10-minute Pack

## Question 1

| | |
|---|---|
| (a) 49 - 34 | **M1** |
| (a) 15 | **A1** |
| **(a) Answer: 15** | |
| (b) lower limit 34 - 1.5 x 15 = 11.5 and upper limit 49 + 1.5 x 15 = 71.5 | **M1** |
| (b) smallest value 29 is not below 11.5, so is not an outlier | **A1** |
| (b) largest value 94 is above 71.5, so is an outlier | **A1** |
| **(b) Answer: smallest is not an outlier; largest is an outlier** | |
| (c) compares median - Q1 = 8 and Q3 - median = 7 | **M1** |
| (c) negative skew (as the larger spread is on that side) | **A1** |
| **(c) Answer: negative skew** | |


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