Method

1. Place all the values in order from smallest to largest.

2. Find the median. For n of data points, find the value in position $\frac{n}{2} + 0.5$ (for example, for 5 data points, find the 3rd data point. This is the median). If n is even, we find the values in positions $\frac{n}{2}$ and $\frac{n}{2} + 1$ and find the point between them by adding them together and dividing by 2 (for example, for 10 data points, add together the 5th and 6th values and divide that by 2).
   The median is called Q_2 (2nd quartile).

3. We are now left with two sets of numbers: those above the median, and those below. We find the median of each of these sets (make sure not to put Q_2 in either set before finding the median).

4. The median of the numbers lower than Q_2 is called Q_1 (1st quartile) and the median of the numbers higher than Q_2 is called Q_3 (3rd quartile).

5. The interquartile range (IQR) is given by $Q_3 - Q_1$.

Drawing a box plot

We can use the values for Q_0 (the minimum value), Q_1, Q_2, Q_3 and Q_4 (the maximum value) to draw a box plot (also called a box and whisker plot). These are useful for quickly seeing if data is skewed.

A box plot is drawn as follows:
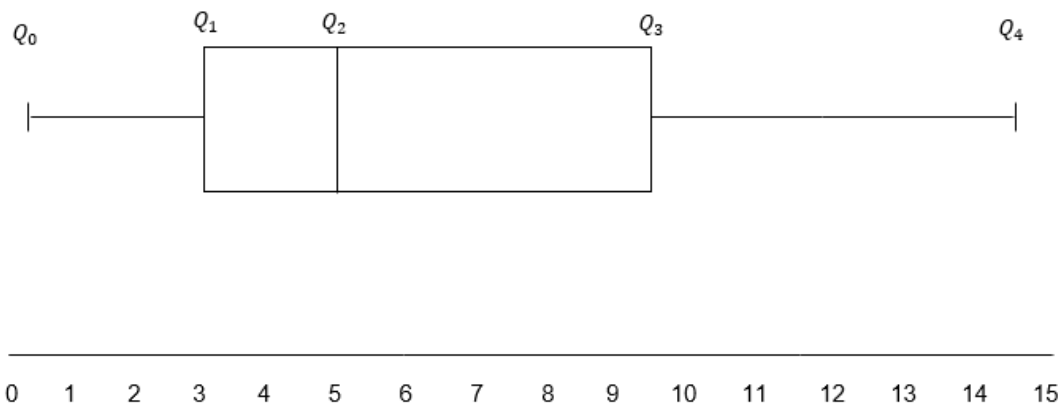
Support: Study Development offers workshops, short courses, 1 to 1 and small group tutorials.

- Join a tutorial or workshop on the Study Development tutorial and workshop webpage or search 'YSJ study development tutorials.'

- Access our Study Success resources on the Study Success webpage or search 'YSJ study success.'