

Relating a box plot to shape

Sunday, 10 February 2019 4:30 pm

★ By the end of the lesson I would hope that you have an understanding and be able to apply to questions the following concepts:

- How to relate a box plot to a shape of a distribution

RECAP:

In the previous lesson we have been looking at:

- The five-number summary
- Box plots

As Mathematics isn't just taught in boxed areas which, once we have finished, we can parcel up and forget, we need to ensure that we keep linking everything we have learnt.

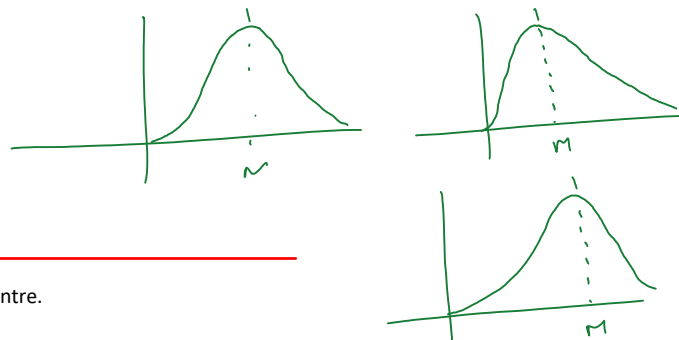
Remember, we have also been looking at how to describe the shapes of data in terms of:

- Symmetrical
- Positively skewed
- Negatively skewed

It's not always practical to draw a histogram.

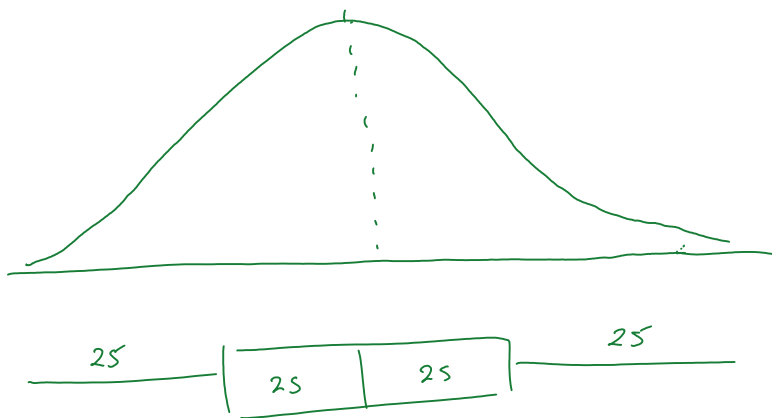
If we have the five-number summary ... we can draw a box plot.

This box plot can always let us know what type of shape the data might have.



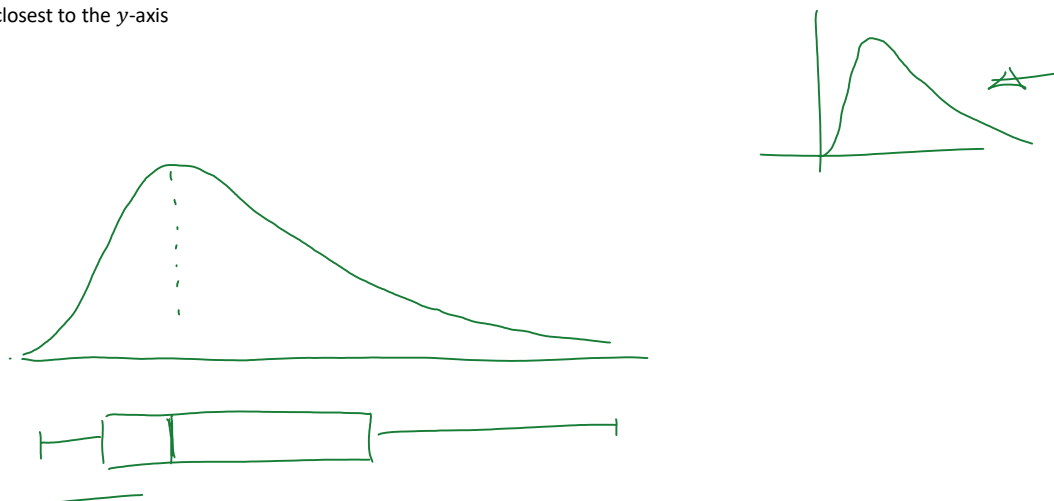
A symmetric distribution

Remember that this type of distribution will have the same shape either side of its centre.



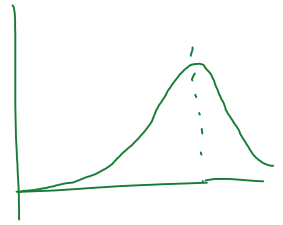
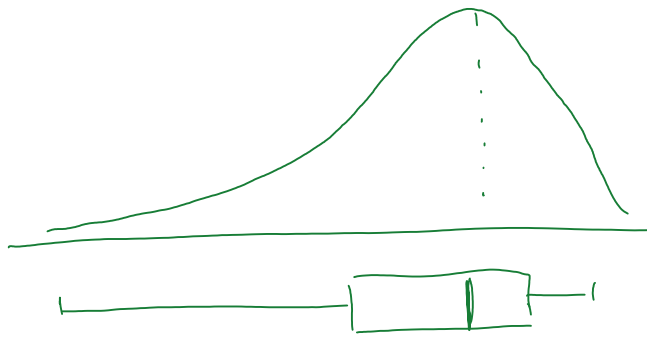
Positively skewed distributions

This graph will have most of its data closest to the y-axis



Negatively skewed distributions

This graph will have most of its data furthest away from the y-axis



Distributions with outliers

We know that an outlier will have a large gap between itself and the main data.

