



Comparing mean, median and mode

Mean = total divided by the number of figures.

Median = middle value when the figures are written in order.

Mode = most common figure in the data.

The factsheet 'Calculating the mode' shows the figures for sick days in a company called Acme Ltd. The number of days taken by the employees were:

0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 2, 2, 2, 3, 3, 14

Now let's compare those figures with the figures from another company, Data Supplies. The number of sick days taken by employees at Data Supplies are:

0, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 3, 3, 3, 4

For this company there are two people with no days off sick, ten with 1 day sick, three 2s, three 3s and one 4. **So the mode is 1.**

If we compare sick days for these companies we could choose to compare using the mean, the median or the mode. Let's look at the difference between them.

We need to know the **mean**, **median** and **mode** for both companies. You can work these out yourself if you want to, but to save time here they are:

	Mean	Median	Mode
Acme Ltd	1.6	1	0
Data Supplies	1.5	1	1

In both companies the **mean** is higher than the number of sick days most people have taken. For Acme Ltd the mean is distorted by the one person who took 14 days off.

The **median** is **1** for both companies. So we'd expect the sickness to be more or less the same in both companies if we used the median values to compare them.

We can also use the **mode** to compare them. Acme Ltd has a mode of **0** and Data Supplies has a higher value of **1**. So going by the mode we expect sickness to be more common in Data Supplies.

Which measure do you think is most useful for comparing the companies in this case? You could say that the mode is best as there seems to be a higher level of sick days taken in Data Supplies than in Acme Ltd - only two people in Data Supplies weren't sick at all.