

## Mean, Mode, Median and Range – definitions from Mr Lardner:

**The mean** (sometimes 'arithmetic **mean**')

To find the **mean**, add up the value of all the numbers in the set, then divide that sum (or total) by the number of numbers in the set.

e.g., in the data set 4, 5, 6, 10, 20 - these add up to 45, so we divide that sum by 5 (which is the number of numbers) which gives a **mean** of 9. This is also called the 'average' in everyday language, but in maths it is called the **mean**.

**The median** is simply the number which comes in the middle of the set of numbers, after you have arranged them in numerical order.

e.g., data set of 8,4,6,1,3,5,7 would be rearranged to 1,3,4,5,6,7,8, so that the number in the middle is the **median** which is 5. The only complication arises when the number of data, or numbers in the series is even. In this case you rearrange the data into numerical order, take the middle two numbers and add them together, then divide them by 2, which gives you your **median**.

e.g., data set 12,8,6,4,10,2 would first be rearranged to 2,4,6,8,10,12. The two middle numbers added together (6 + 8) give 14, which divided by 2 gives a **median** of 7.

**The mode** is simply the number, or value of data that occurs most frequently.

e.g., in data set 1,1,2,5,6,7,7,8,8,8,8,9,9,10,12 the **mode** is 8, because it occurs most often.

**The range** is simply the measure of the spread of data values, that is, the **range** is just the difference between the largest and the smallest values in the set.

e.g., in the data set 1,1,2,5,6,7,7,8,8,8,8,9,9,10,12 you would take the largest number (12) and subtract from that the smallest number (1), so the difference (12-1) is 11 and that means that the **range** is 11. [Simples!](#)