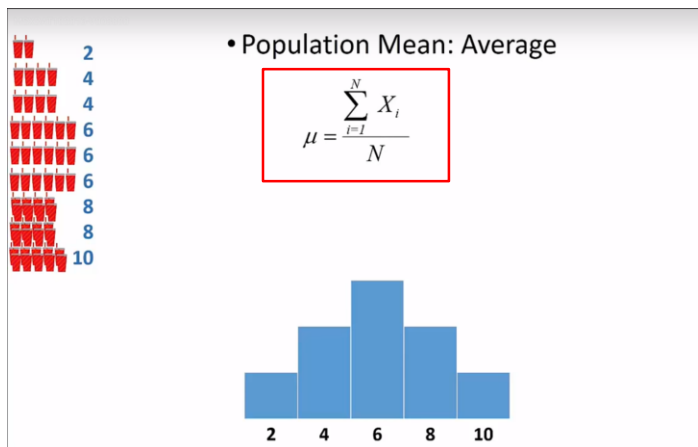


Descriptive statistics



- Sample Mean : Average

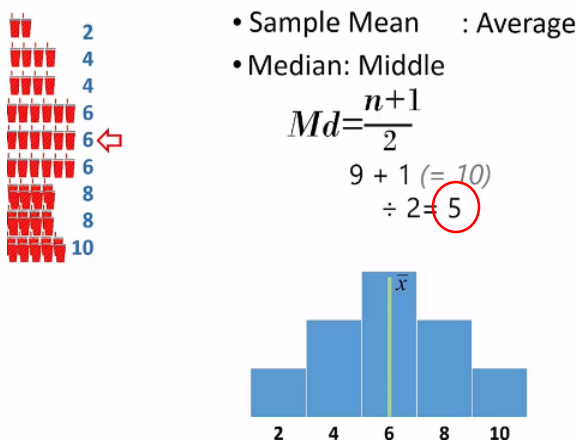
$$\bar{x} = \frac{\sum_{i=1}^n x_i}{n}$$

$$2+4+4+6+6+6+8+8+10 \quad (= 54)$$

$$\div 9$$

$$= 6$$

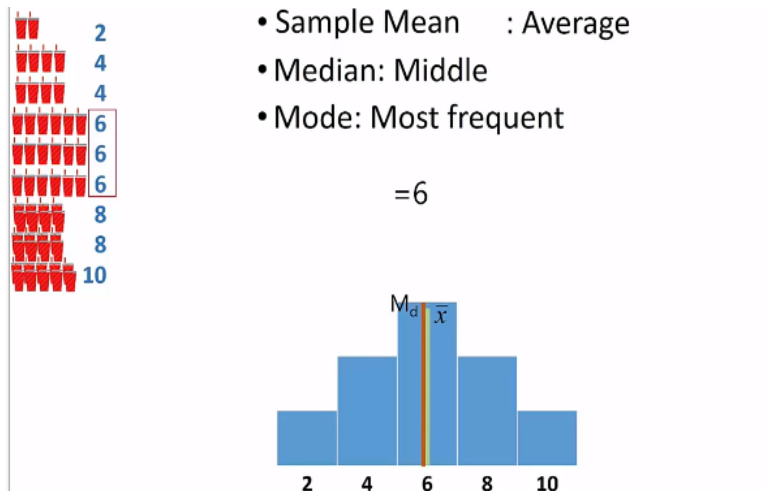
Firstly, we have to plot data in histogram.



The middle value – it is a positional measure! **The median is not 5, it's its position.** The position of median is the fifth value.

Me = 6

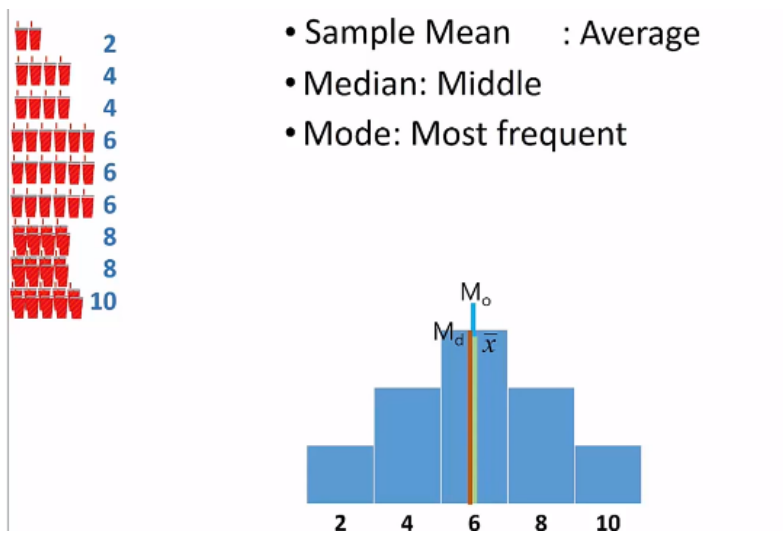
The data has to be ordered in order to measure the median position and see its value depending on the position and the sample element on that position.



The most frequent element in the sample is mode.

Mo = 6

Conclusion

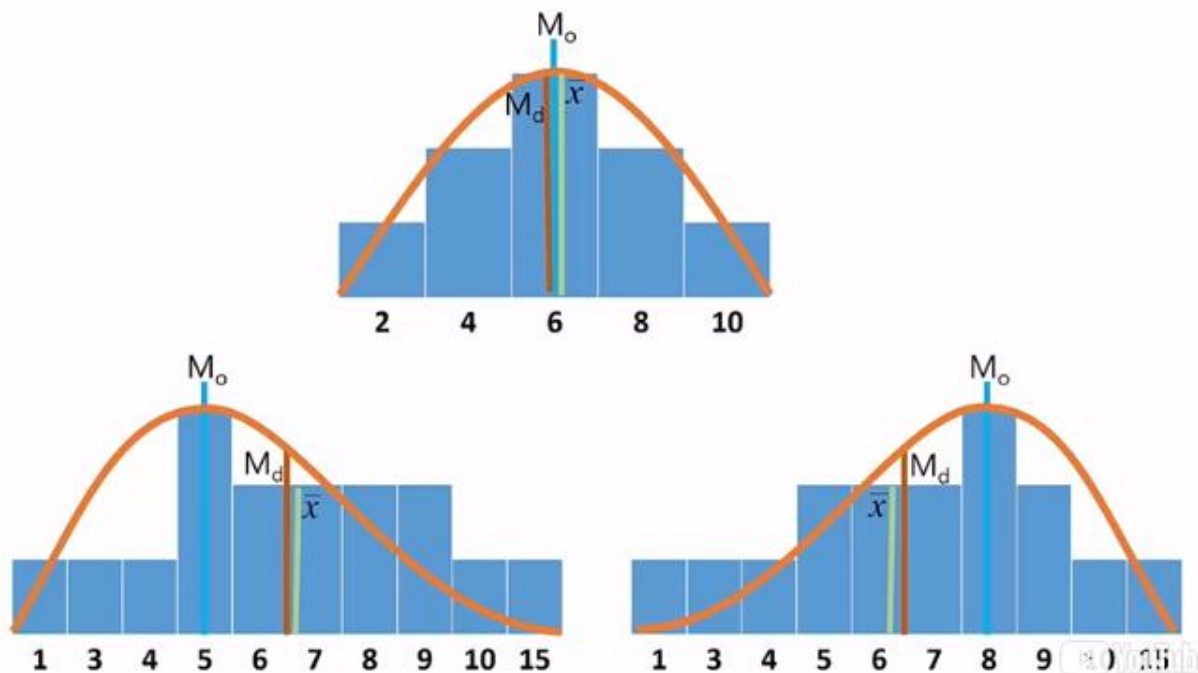


This is a **normal distribution**.

$\mu (\bar{x}) = Me = Mo$

It is the perfect distribution of data. Actually, when doing the analysis, the distribution of data MUST be in normal or close to normal distribution. It is one of necessary assumption that has to be met in order to have valid results.

Three types of distribution



		Average	Median (M_d)	Mode
1.	Normal distribution	\bar{x}	= Me	= Mo
2.	Right skewed distribution	\bar{x}	> Me	> Mo
3.	Left skewed distribution	\bar{x}	< Me	< Mo