

The mean & the median

- * The mean also called arithmetic mean or the average is obtained by dividing the sum of replicate measurements by the number of measurements in the set.

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

- * The median is the middle value in a set of data that has been arranged in numerical order.

Example

Calculate the mean & median for the data shown below.

19.4, 19.6, 20.1, 19.5, 20.3, 19.8

Solution

$$\text{Mean} = \bar{x} = \frac{19.4 + 19.5 + 19.6 + 19.8 + 20.1 + 20.3}{6}$$

$$= 19.78 \approx 19.8 \text{ ppm Fe.}$$

$$\text{Median} = \frac{19.6 + 19.8}{2} = 19.7 \text{ ppm Fe.}$$