Arithmetic Mean

The average of a given set of numbers is called the arithmetic mean or simply the mean of the given numbers.
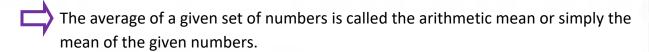
$$\text{Mean} = \frac{\text{Sum of all Observations}}{\text{Number of observations}}$$

Let us understand with some examples:

Example: Find the mean of the first five multiples of 4.

Solution: The first five multiples of 4 are 4, 8, 12, 16 and 20.

$$\text{Hence, Their mean} = \frac{4+8+12+16+20}{5}$$

$$= \frac{60}{5} = 12$$

Example: The mean of six numbers 6, 8, 5, 7, x and 4 is 7. Find the value of x.

Solution: $\text{Mean} = \frac{\text{Sum of all Observations}}{\text{Number of observations}}$

$\Rightarrow \qquad 7 = \frac{6+8+5+7+x+4}{6}$

$\Rightarrow \qquad 7 \times 6 = 30 + x$

$\Rightarrow \qquad 42 = 30 + x$

$\Rightarrow \qquad 42 - 30 = x$

$\Rightarrow \qquad x = 12$