How to Find the Mean

The mean is the **average** of the numbers.

It is easy to calculate: **add up** all the numbers, then **divide by how many** numbers there are.

In other words it is the **sum** divided by the **count**.

Example 1: What is the Mean of these numbers?

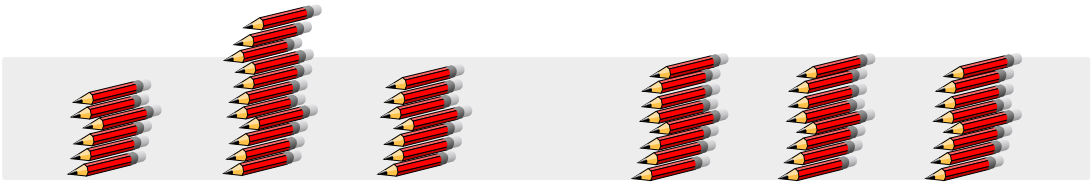
6, 11, 7

- Add the numbers: **6 + 11 + 7 = 24**
- Divide by *how many* numbers (there are 3 numbers): **24 / 3 = 8**

The Mean is 8

Why Does This Work?

It is because 6, 11 and 7 added together is the same as 3 lots of 8:



6 + 11 + 7 = 8 + 8 + 8

It is like you are "flattening out" the numbers

Example 2: Look at these numbers:

3, 7, 5, 13, 20, 23, 39, 23, 40, 23, 14, 12, 56, 23, 29

The sum of these numbers is 330

There are fifteen numbers.

The mean is equal to 330 / 15 = 22

The mean of the above numbers is 22

Negative Numbers

How do you handle negative numbers? Adding a negative number is the same as subtracting the number (without the negative). For example 3 + (−2) = 3−2 = 1.

Knowing this, let us try an example:

Example 3: Find the mean of these numbers:

3, −7, 5, 13, −2

- The sum of these numbers is **3 – 7 + 5 + 13 – 2 = 12**
- There are **5** numbers.
- The mean is equal to **12 ÷ 5 = 2.4**

The mean of the above numbers is 2.4

Here is how to do it one line:

$$\text{Mean} = \frac{3 - 7 + 5 + 13 - 2}{5} = \frac{12}{5} = \mathbf{2.4}$$

Try it yourself!

Average weight of a group of chimpanzees

- Chimp 1 weighs 50 kg
- Chimp 2 weighs 49 kg
- Chimp 3 weighs 61 kg

$$\frac{\text{Sum}}{\text{Count}} = \frac{\square + \square + \square}{3}$$

$$= \frac{0 + 0 + 0}{3} = \frac{0}{3}$$

Another

Now have a look at The Mean Machine.

Advanced Topic: the mean we have just looked at is also called the "Arithmetic Mean", because there are other means such as the Geometric Mean.

Question 1 Question 2 Question 3 Question 4 Question 5
Question 6 Question 7 Question 8 Question 9 Question 10