

Lesson 2 – Mean and Mode

Mean: This is also known as the *average* of the data set. This can be found by adding up the value of each number, then dividing by the total amount of numbers we added.

For Example: Look at the following data set showing grades on a Math Test:

87%	95%	80%	73%
79%	89%	90%	65%

Step 1 Add up all the percentages together to get a total.

$$= 87 + 95 + 80 + 73 + 79 + 89 + 90 + 65$$

$$= 658$$

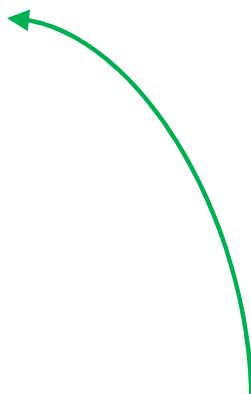
Step 2: Divide the total from step 1 by the number of data entries there are

$$= 658 \div 8$$

$$= 82.25$$

Therefore the mean, or average on the test was 82.25%

Number of Data Entries = 8



Example 2: The following data set is the height of 12 people given in centimeters.

154cm	125cm	88cm	110cm	142cm	194cm
209cm	120cm	92cm	185cm	138cm	147cm

Calculate the mean of the data set.

$$\text{Total} = 154+125+88+110+142+194+209+120+92+185+138+147$$

$$\text{Total} = 1704$$

$$\text{Number of Data Entries} = 12$$

$$\text{Mean} = 1704 \div 12$$

$$\text{Mean} = 142$$

Mode: This is the value that occurs the most often in a data set. If there is more than one number that comes up the same amount you can have more than one mode. If all the numbers come up the same amount, you have no mode.

Example: Let's examine the following data set showing shoe sizes of grade 10 students:

8	10	6	9	9	8
7	10	12	14	8	6
7	8	8	7	9	10

We need to determine how many different sizes there are, then count how many of each size we have.

Size 6	Size 7	Size 8	Size 9	Size 10	Size 12	Size 14
2	3	5	3	3	1	1

Since size 8 is the shoe size that come up the most often we would say that it is the mode.

Example 2: What is the mode of the following data set?

521	152	512	125	251	251
251	125	512	215	152	215
215	152	251	125	512	125
521	215	152	152	251	521

125
4

152
5

215
4

251
5

512
3

521
3

Since the most common numbers comes up 5 times and both 152 and 251 appear 5 times, we would say that both of those numbers are the mode.