

# CC8 Skills

**Data Set -** 5, 7, 7, 7, 13, **20**, 22, 31, 38, 44, 47

**Mode**  
↓  
**Lower Quartile**      **Median**      **Upper Quartile**  
↑

**Mean** - add all the numbers

$$5+7+7+7+13+20+22+31+38+44+47$$

Average then divide by the number of numbers

$$11$$

$$21.\overline{90}$$

**Median** - put the numbers in order from least to greatest then count in

Middle from both ends to locate the middle data value. If there are

**20**,

2 numbers in the middle...add them and divide by 2.

**Mode** - find the data value that happens the most.

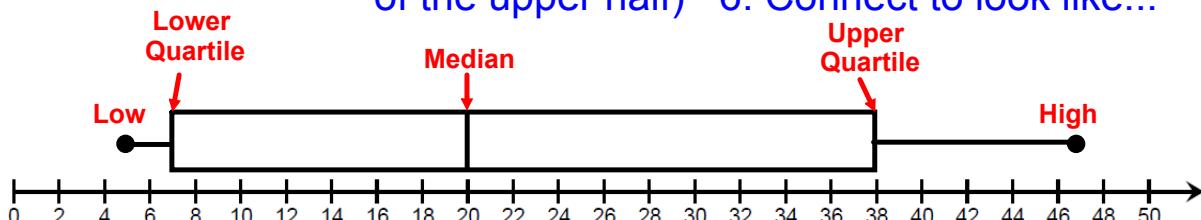
**Most**  
7

**Range** - difference between high and low

$$42$$

$$47 - 5 = 42$$

**Box and Whiskers** - 1. Plot the low 2. Plot the high 3. Plot the median 4. Plot the lower quartile (median of the lower half) 5. Plot the upper quartile (median of the upper half) 6. Connect to look like...



**Interquartile Range** - difference between the upper quartile and the lower quartile

$$33$$

$$38 - 7 = 33$$

**Mean Absolute Deviation** - 1. subtract each data value from the center of the data set (either the mean or median) 2. Add the absolute values of all these differences. 3. Divide this sum by the number of numbers.

13	20	20	20	20	20	20	20	20	20	20	20
	-5	-7	-7	-7	-13	-20	-22	-31	-38	-44	-47
Absolute Values	15	13	13	13	7	0	2	11	18	24	27

$$\frac{15 + 13 + 13 + 13 + 7 + 0 + 2 + 11 + 18 + 24 + 27}{11} = 13$$