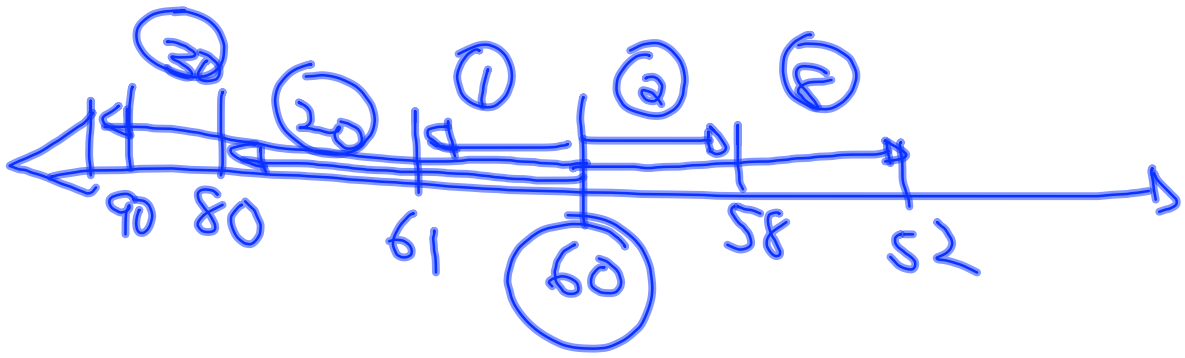
Mean and Standard Deviation

Mean: The average of the data *or* the middle of the data. To calculate the mean you total up all of your values and divide by the number of values.

$\bar{x}$ μ

σ

Standard Deviation: Is a measure of how far, on average, each value is from the mean. Standard deviation is called a measure of dispersion. A small standard deviation means that the data is clustered fairly close to the mean. A large standard deviation means that the data is spread apart quite far from the mean.



Eg 2) A company wants to promote its most consistent and productive salesperson. If Jaci sells $80,000 worth of goods with a standard deviation of $9,000 and Jason sells $80,000 worth of stuff with a standard deviation of $6,000, who should the company promote?

Eg 3) Find the mean and standard deviation of the following data:

	# of Children	0	1	2	3	4
L_2	Frequency	3	5	8	6	2

1. STAT
2. → CALC Menu
3. Select 1 VAR-STATS
4. Type 1 VAR-STATS L_1, L_2

$\bar{x} = 1.96$

$\sigma = 1.14$

Eg 4) Find the mean and standard deviation of the following data:

Mark	57	62	69
Frequency	2	5	3

$\bar{x} = 63.1$ $\sigma = 4.3$

Note: If the data is randomly listed and not contained in a frequency table, then only use L_1 with 1 VAR - STATS.

Eg 5) Find the mean and standard deviation for the following data: 17, 19, 14, 16, 15, 13, 11 and 19.

$\bar{x} = 15.5$

$\sigma = 2.65$

Pg. 477 1, 3, 8

Assignment:
Pg. 477 #1-4, 7-8