CALCULATING STANDARD DEVIATION (Ojakian – Modified from online document)

$\bar{x}$ → $n-1=5$

Mean:_____6_____ ***n*:**_____6_**(pure coincidence)**_____

Test Score (x)	**Difference from the mean** $(x-\bar{x})$	**(Difference from the mean)^2** $(x-\bar{x})^2$
2	$2-6=-4$	$(-4)^2=16$
3	$3-6=-3$	$(-3)^2=9$
3	$3-6=-3$	9
8	$8-6=2$	4
10	$10-6=4$	16
10	$10-6=4$	$(4)^2=16$
	Sum of (Difference from the mean)^2 $\sum(x-\bar{x})$	70

$70/5=14$

Sum of (Difference from the Mean)^2 divided by degrees of freedom (*n – 1)*:_____ → **This is called sample variance.**

$$\frac{\sum(x-\bar{x})^2}{(n-1)}=$$

Sample Standard deviation = square root of what you just calculated (sample variance).

Sample Standard deviation = $\sqrt{\frac{\sum(x-\bar{x})^2}{(n-1)}}=$ $\sqrt{14}=3.74$.

For the population versions just change the "n-1" to an "n".

Pop Var $=70/6=11.67$

Pop SD $=\sqrt{11.67}=3.42$