Algebra II
Introduction to Standard Deviation

On the number lines below, make a **dot plot** of each data set. State the range, mean and median of each data set.

Data Set A: 6, 6, 8, 10, 10

Data Set B: 6, 6, 6, 8, 10, 10

Data Set C: 6, 6, 8, 10, 20

Set A:

```
5            10            15            20
```
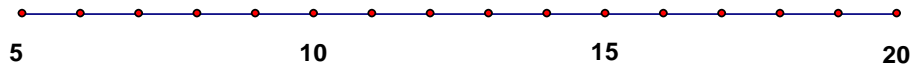
Range _____

Mean _____

Median _____

Set B:

```
5            10            15            20
```

Range _____

Mean _____

Median _____

Set C:

```
5            10            15            20
```

Range _____

Mean _____

Median _____

Calculate the Standard Deviation of a Population (σ) for each data set and write this value under the range on page one.

Data Set A

Data	Mean	Data – Mean	(Data – Mean)^2

Sum (Σ) of (Data – Mean)^2 = _____

$$\frac{Sum\ of\ (Data-Mean)^2}{Number\ of\ Data\ Points} = \text{_____}$$

$$\sigma = \sqrt{\frac{Sum\ of\ (Data-Mean)^2}{Number\ of\ Data\ Points}} = \text{_____}$$

Data Set B

Data	Mean	Data – Mean	(Data – Mean)^2

Sum (Σ) of (Data – Mean)^2 = _____

$$\frac{Sum\ of\ (Data-Mean)^2}{Number\ of\ Data\ Points} = \text{_____}$$

$$\sigma = \sqrt{\frac{Sum\ of\ (Data-Mean)^2}{Number\ of\ Data\ Points}} = \text{_____}$$

Data Set C

Data	Mean	Data – Mean	(Data – Mean)^2

Sum (Σ) of (Data – Mean)^2 = _____

$$\frac{Sum\ of\ (Data-Mean)^2}{Number\ of\ Data\ Points} = \underline{\hspace{2cm}}$$

$$\sigma = \sqrt{\frac{Sum\ of\ (Data-Mean)^2}{Number\ of\ Data\ Points}} = \underline{\hspace{2cm}}$$

Write a formula for calculating the Standard Deviation of a Population.

Define Standard Deviation.