

## Computing Formula Standard Deviation

Activity: Select the remaining 15 of the 30 scores in your data set that you did not select for the previous activity and compute the variance and standard deviation of the scores you selected using the Computing Formula. Also, please interpret the result.

Data Set:

21 9 17 24 1 9 27 9 24 24 17 5 5 11 21 13 9 5 11 15 19 30 3 24 1 13 27 1 17 17

Remaining set:

9 9 9 9 1 17 17 17 24 24 27 11 11 21 13

Computing  
Formula

$$s^2 x = \frac{\sum x^2 - (\sum x)^2}{N}$$

$$9+9+9+9+17+17+17+24+24+27+11+11+21+13+1=219$$

$$9^2 = 81$$

$$9^2 = 81$$

$$9^2 = 81$$

$$9^2 = 81$$

$$17^2 = 289$$

$$17^2 = 289$$

$$17^2 = 289$$

$$24^2 = 576$$

$$24^2 = 576$$

$$27^2 = 729$$

$$11^2 = 121$$

$$11^2 = 121$$

$$21^2 = 441$$

$$13^2 = 169$$

$$1^2 = 1$$

$$\hline 3925$$

$$s^2 x = \frac{\sum x^2 - \frac{(\sum x)^2}{N}}{N}$$

$$= \frac{219^2}{15}$$

$$= \frac{47961}{15}$$

$$= 3197.4$$

$$\begin{array}{r} 3925 \\ - 3197.4 \\ \hline 727.6 \end{array}$$

$$\frac{727.6}{15} = 48.51$$

$$\sqrt{48.51} \approx 6.96$$

**Interpretation:** The result shows that the number of fish eaten by a dolphin in the deviate, on the average, 6.96 fish from the mean.