

Name: _____

Date Started: _____ Date Finished: _____ Score: _____

Learning Activity Sheet
Range, Average Deviation, Variance, and
Standard Deviation of Grouped Data

Use the table headings as your guide for finding the needed measures of variability. Write the answers in the spaces provided.

Score (x)	f	Mid-Value (x)	fx	$x - \bar{x}$	$ x - \bar{x} $	$f x - \bar{x} $
1-10	6					
11-20	12					
21-30	22					
31-40	13					
41-50	4					
	$\Sigma f =$		$\Sigma fx =$			$\Sigma f x - \bar{x} =$

Score (x)	f	Mid-Value (x)	fx	$x - \bar{x}$	$(x - \bar{x})^2$	$f(x - \bar{x})^2$
1-10	6					
11-20	12					
21-30	22					
31-40	13					
41-50	4					
	$\Sigma f =$		$\Sigma fx =$			$\Sigma f(x - \bar{x})^2 =$

$$\text{Mean } (\bar{x}) = \frac{\sum fx}{\sum f} = \underline{\hspace{2cm}} \approx \underline{\hspace{2cm}}$$

$$\text{Range} = \text{largest mid-value} - \text{smallest mid-value} = \underline{\hspace{2cm}} \underline{\hspace{2cm}} \\ = \underline{\hspace{2cm}}$$

$$\text{Average deviation} = \frac{\sum f|x - \bar{x}|}{\sum f} = \underline{\hspace{2cm}} \approx \underline{\hspace{2cm}}$$

$$\text{Variance: } \sigma^2 = \frac{\sum f(x - \bar{x})^2}{\sum f} = \underline{\hspace{2cm}} \approx \underline{\hspace{2cm}}$$

$$\text{Standard deviation: } \sigma = \sqrt{\frac{\sum f(x - \bar{x})^2}{\sum f}} = \sqrt{\sigma^2} \approx \underline{\hspace{2cm}}$$