

NAME: _____

CLASS: _____

CHAPTER 8: MEASURES OF DISPERSION FOR UNGROUPED DATA

SUBTOPIC 8.2 : MEASURES OF DISPERSION

Calculate the variance and standard deviation of each of the following sets of data.

1. **8, 9, 11, 12, 13, 16**

$$\text{Mean, } \bar{x} = 8 + \frac{[\square] + [\square] + [\square] + [\square] + [\square]}{5} = [\square]$$

$$\text{Variance, } \sigma^2 = \frac{8^2 + [\square]^2 + [\square]^2 + [\square]^2 + [\square]^2 + [\square]^2}{6} - 11.5^2$$

$$= [\square]$$

$$\text{Standard deviation, } \sigma = \sqrt{6.92} = [\square]$$

2.

Age,x	Frequency,f	fx	x^2	fx^2
1	1	1		1
2	3			
3	8			
4	6			
5	7			
	$\sum f =$	$\sum fx =$		$\sum fx^2 =$

Mean, \bar{x}

$$= \frac{\sum fx}{\sum f}$$

$$= \frac{[\square]}{[\square]}$$

$$= [\square]$$

$$\text{Variance, } \sigma^2 = \frac{\sum fx^2}{\sum f} - \bar{x}^2 = \frac{[\square]}{[\square]} - [\square] = [\square]$$

$$\text{Standard deviation, } \sigma = \sqrt{\frac{\sum fx^2}{\sum f} - \bar{x}^2} = \sqrt{[\square]} = [\square]$$