

The following data are the total number of “active shooter” incidents in the US between 2004 and 2013 according to a 2014 FBI report.

4 9 10 14 8 19 26 10 21 17

1. Obtain the mean for this data. Label it using our notation from class.

$$\bar{x} = 13.8 \text{ incidents}$$

2. Obtain the standard deviation for this data. Again, label using our notation.

$$s = 6.828 \text{ incidents}$$

3. Find the median of the data. Label it using our notation from class.

$$\tilde{x} = x_{.5} = \frac{10 + 14}{2} = 12 \text{ incidents}$$

4. Find the iqr for this data. Show your work and label values along the way using our notation.

$$.25 \cdot 10 = 2.5 \rightarrow 3 \Rightarrow x_{.25} = 9 \text{ incidents} \qquad .75 \cdot 10 = 7.5 \rightarrow 8 \Rightarrow x_{.75} = 19 \text{ incidents}$$

$$iqr = 19 - 9 = 10 \text{ incidents}$$

5. Find $x_{.2}$. Show your work.

$$.2 \cdot 10 = 2 \rightarrow \text{average } 2^{nd} \text{ and } 3^{rd} \Rightarrow x_{.2} = \frac{8 + 9}{2} = 8.5 \text{ incidents}$$