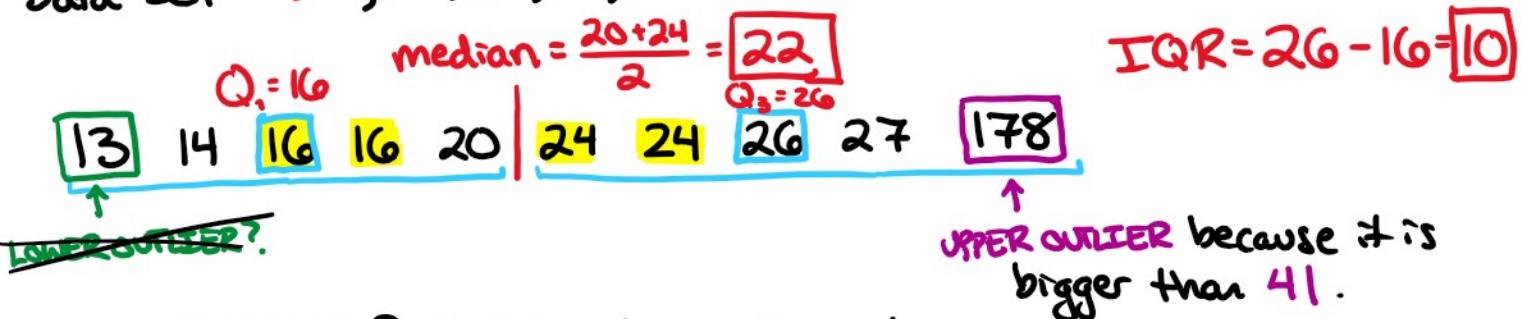


Data Set: ~~24, 27, 16, 14, 20, 24, 178, 13, 16, 26~~



mean - average of all data values in the set

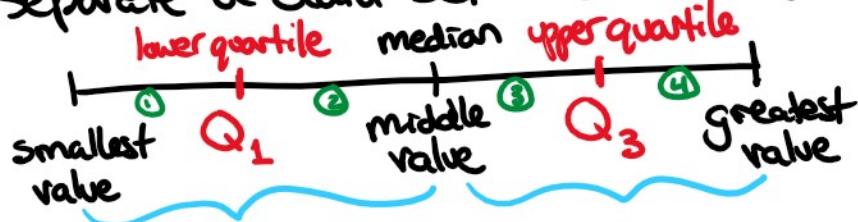
$$\bar{x} = \frac{\text{add up all values}}{\# \text{ of values}} \quad \bar{x} = \frac{13+14+16+16+20+24+24+26+27+178}{10} = 35.8$$

median - middle value or the average of the two middle values

mode - the data values that occur most frequently

16 and 24

quartiles - separate a data set into four equal parts



inter-quartile range - range of values from lower quartile to upper quartile (IQR)

$$IQR = Q_3 - Q_1$$

outlier - a value in a data set that is significantly different than the other data values

LOWER OUTLIERS

$$Q_1 - 1.5 \cdot IQR$$

$$16 - 1.5 \cdot 10$$

UPPER OUTLIERS

$$Q_3 + 1.5 \cdot IQR$$

$$26 + 1.5 \cdot 10$$

$$\begin{array}{r} \text{---} \\ 16 - 1.5 \cdot 10 \\ 16 - 15 \\ \underline{1} \\ \uparrow \end{array}$$

If there exists a data value smaller than $\underline{1}$, then that value is a lower outlier.

$$\begin{array}{r} 26 + 1.5 \cdot 10 \\ 26 + 15 \\ \underline{41} \\ \uparrow \end{array}$$

If there exists a data value that is larger than $\underline{41}$, then that value is an upper outlier.