

## Finding the M.A.D. (mean absolute deviation)

① Find the mean ( $\bar{x}$ ) of the data set

$$\text{Ex: } 15, 17, 23, 19 \quad \bar{x} = \frac{74}{4} = 18.5$$

② Find the absolute value of the difference between each data point and the mean.

$$\text{Ex: } |15 - 18.5| = 3.5$$

$$|17 - 18.5| = 1.5$$

$$|23 - 18.5| = 4.5$$

$$|19 - 18.5| = 0.5$$

\* Absolute Value  $\rightarrow$  distance from 0 and distance cannot be negative  
So your answer must be positive!

③ Find the mean of your answers from step 2

$$\text{Ex: } \frac{3.5 + 1.5 + 4.5 + 0.5}{4} = \frac{10}{4} = 2.5$$

#2 Data: 98, 96, 86, 95, 94, 92

$$\text{Step 1: } \bar{x} = 93.5$$

$$\text{Step 3: M.A.D.} = 3$$

$$\text{Step 2: } |98 - 93.5| = 4.5$$

$$|96 - 93.5| = 2.5$$

$$|86 - 93.5| = 7.5$$

$$|95 - 93.5| = 1.5$$

$$|94 - 93.5| = 0.5$$

$$|92 - 93.5| = 1.5$$