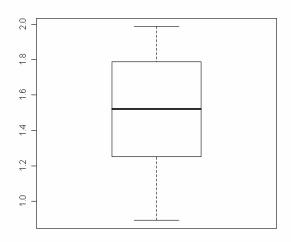
Name \_\_\_\_

ID

- 1. What measure of central tendency is most sensitive to extreme values?
- A) Mode B) Median C) Mean D) They are about the same. A
- 2. A market research company has collected data on the price of a particular brand of soap in several different locations. The prices (\$) are as follows:

Draw a boxplot based on the five-number-summary: Min, Q1, Median, Q3, Max.

## Min=0.89 Q1=1.25 Median= 1.52 Q3=1.79 Max=1.99



3. Find the sample mean and sample standard deviation of the data: 2, 5, 8, 6, 1.

Sample mean 
$$\bar{x} = \frac{1}{n} \sum_{i=1}^{n} x_i = \frac{1}{5} (2 + 5 + 6 + 8 + 1) = \frac{22}{5} = 4.4$$

Sample standard deviation

$$s = \sqrt{s^2} = \sqrt{\frac{1}{n-1} \sum_{i=1}^{n} (x_i - \overline{x})^2} = \sqrt{\frac{1}{4} \sum_{i=1}^{5} (x_i - 4.4)^2} = \sqrt{8.3} = 2.88$$