$\qquad$ ID $\qquad$

1. What measure of central tendency is most sensitive to extreme values?
A) Mode
B) Median
C) Mean
D) They are about the same.
Ans. $\qquad$ C
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:
$0.89,0.95,1.25,1.36,1.49,1.55,1.65,1.79,1.89,1.99$.
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
$s=\sqrt{s^{2}}=\sqrt{\frac{1}{n-1} \sum_{i=1}^{n}\left(x_{i}-\bar{x}\right)^{2}}=\sqrt{\frac{1}{4} \sum_{i=1}^{5}\left(x_{i}-4.4\right)^{2}}=\sqrt{8.3}=2.88$

