PRACTICE XI

1. In a random sample of 20 high school students, the number of text messages sent by each during the past few days were:

$$\{0, 4, 8, 12, 13, 15, 15, 18, 23, 24, 40, 43, 47, 50, 53, 57, 59, 61, 61, 65\}$$

(a) Create a stemplot of the number of text messages sent by students
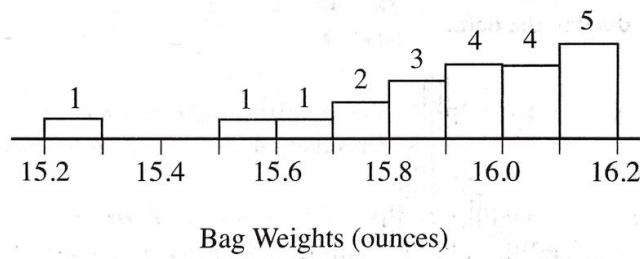
(b) Describe the distribution

(c) Would a boxplot give more, less, or basically the same information?

2. A random sample of scores at a bowling alley one day gives the following summary statistics:

$$
\begin{aligned}
n &= 26 \\
\overline{x} &= 132.34 \\
s &= 10.18 \\
min &= 113 \\
Q_1 &= 126 \\
med &= 134.5 \\
Q_3 &= 139 \\
max &= 160
\end{aligned}
$$

Does this distribution contain any outliers?

3. The histogram below shoes the distribution of weights of the 21 bags of candy coming off an assembly line during a one-minute production interval.

Bag Weights (ounces)

(a) Write a few sentences to describe the distribution of bag weights for the one minute interval.

(b) One of the bags weighs 15.85 ounces. If this bag weighed 15.75 ounces instead of 15.85 ounces, what effect would this decrease have on the mean and on the median?