Part 1 – Graphing histograms

Total Number of Yards (Column B)

- Graph the histogram on page 1.6. Describe the shape.

- Estimate the mean _____ and the median _____.

  Does the mean or the median best describe the data set? Why?

- Based on the histogram, draw what you think the box plot would look like.

Average Number of Yards (Column C)

- Graph the histogram on page 1.7. Describe the shape.

- Estimate the mean _____ and the median _____.

  Does the mean or the median best describe the data set? Why?

- Based on the histogram, draw what you think the box plot would look like.

Longest Run of the Season (Column D)

- Graph the histogram on page 1.8. Describe the shape.

- Estimate the mean _____ and the median _____.

  Does the mean or the median best describe the data set? Why?

- Based on the histogram, draw what you think the box plot would look like.

Number of Touchdowns (Column E)

- Graph the histogram on page 1.9. Describe the shape.

- Estimate the mean _____ and the median _____.

  Does the mean or the median best describe the data set? Why?

- Based on the histogram, draw what you think the box plot would look like.

Part 2 – Graphing box plots

Total Number of Yards (Column B)

- Change the histogram on page 1.6 to a box plot. How does your box plot compare to the handheld's?

- Where is the median located on the box plot? Where do you think the mean will be?

- Calculate the mean and the median. How do your estimates compare?

Average Number of Yards (Column C)

- Change the histogram on page 1.7 to a box plot. How does your box plot compare to the handheld's?

- Where is the median located on the box plot? Where do you think the mean will be?

- Calculate the mean and the median. How do your estimates compare?

Longest Run of the Season (Column D)

- Change the histogram on page 1.8 to a box plot. How does your box plot compare to the handheld's?

- Where is the median located on the box plot? Where do you think the mean will be?

- Calculate the mean and the median. How do your estimates compare?

Number of Touchdowns (Column E)

- Change the histogram on page 1.9 to a box plot. How does your box plot compare to the handheld's?

- Where is the median located on the box plot? Where do you think the mean will be?

- Calculate the mean and the median. How do your estimates compare?

Conclusions

- How does the shape of the histogram determine the shape of the box plot?

- What is the shape of the histogram if the value of the mean is approximately the *same* as the value of the median?

- What is the shape of the histogram if the value of the mean is *greater* than the value of the median? *Less* than?

- What effect do outliers have on the shape of the histogram and box plot?

- What effect do outliers have on the value of the mean? Median?