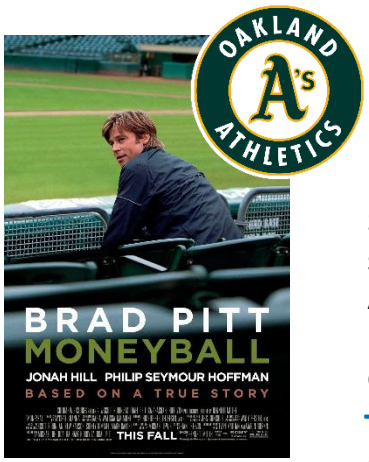
MATH 181 Name: _____

Topics: **dot plots, stemplots, histograms**



Moneyball

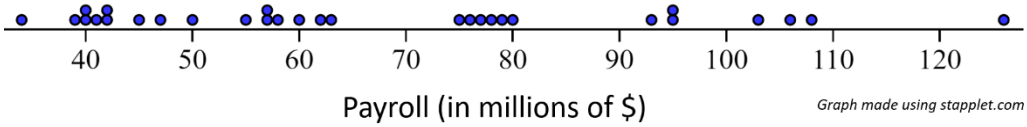
"Moneyball" depicts the 2002 season of the Oakland Athletics (the A's) baseball team. When the movie was released, it was a hit – grossing $110 million. It was surprising that a move about the Oakland A's was successful. After all, in that 2002 season, the New York Yankees (not the A's) scored the most runs. The Atlanta Braves (not the A's) had the largest division lead. And the Anaheim Angels (not the A's) won the championship.

Today's Key Analysis: Why would anyone make (or watch) a movie about the Oakland A's?

Dot Plots

"There are rich teams, and then there are poor teams, then there's 50 feet of crap, and then there's us."

– Brad Pitt, playing the GM of the Oakland A's in "Moneyball"



Payroll (in millions of $)

Graph made using stapplet.com

Team	Payroll (millions)
New York Yankees	$126
Boston Red Sox	$108
Texas Rangers	$106
Arizona Diamondbacks	$103
Los Angeles Dodgers	$95
New York Mets	$95
Atlanta Braves	$93
Seattle Mariners	$80
Cleveland Indians	$79
San Francisco Giants	$78
Toronto Blue Jays	$77
Chicago Cubs	$76
St. Louis Cardinals	$75
Houston Astros	$63
Anaheim Angels	$62
Baltimore Orioles	$60
Philadelphia Phillies	$58
Chicago White Sox	$57
Colorado Rockies	$57
Detroit Tigers	$55
Milwaukee Brewers	$50
Kansas City Royals	$47
Cincinnati Reds	$45
Pittsburgh Pirates	$42
Florida Marlins	$42
San Diego Padres	$41
Minnesota Twins	$40
Oakland A's	$40
Montreal Expos	$39
Tampa Bay Devil Rays	$34

1. On the dot plot above, label the point that represents the New York Yankees. Then, label the Oakland A's. Based on their player payrolls, which team would you expect to win more games?

2. What are some advantages and disadvantages of using a dot plot to visualize data?

Stemplots

3. Below, create a stemplot of the payroll data.

4. What are some advantages and disadvantages of using a stemplot to visualize data?

Histograms

5. Using the payroll data, complete the frequency table. Then, create a histogram of the data.

Payroll (millions)	Frequency	Relative Frequency
Total	**30**	**100%**

6. What would change about your graph if you made a *relative frequency* histogram?

7. What are some advantages and disadvantages of using a histogram to visualize data?