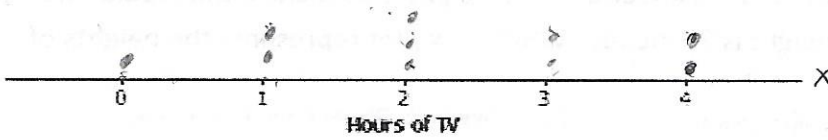


1. Each person in a random sample of ten ninth graders was asked "How many hours did you spend watching TV last night?" The data for these ten students is to the right.

a) Construct a dot plot of the data on hours of TV.



| Student | Hours of TV |
|---------|-------------|
| 1       | 2           |
| 2       | 1           |
| 3       | 0           |
| 4       | 3           |
| 5       | 4           |
| 6       | 1           |
| 7       | 2           |
| 8       | 2           |
| 9       | 4           |
| 10      | 3           |

b) Would you describe this data distribution as approximately symmetric or as skewed?

Approximately symmetric (Bell curve)

c) Calculate the values of the mean and the median for this data set.

$\bar{X} = \frac{\sum x}{n}$  Mean =  $\frac{22}{10} = [2.2]$  Median =  $[2]$   $\rightarrow \frac{10}{2} = 5$

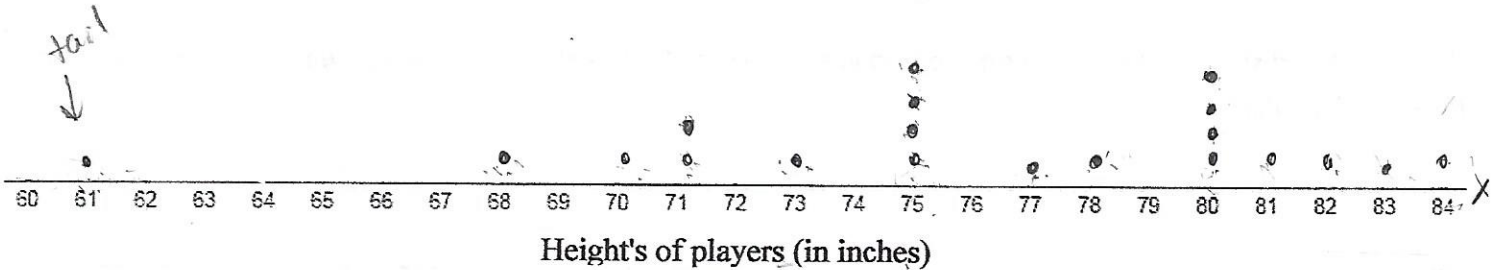
d) If you wanted to describe a typical number of hours of TV for these ten students, would you use the mean or the median?

(# = normal)  
B/c the distribution is symmetric I would use the mean.  
(No outliers)

2. The height's of 20 basketball players, in inches, are given below:

73, 61, 68, 70, 71, 75, 80, 81, 82, 84, 78, 75, 80, 75, 77, 75, 80, 83, 80, 71  
61, 68, 70, 71, 71, 73, 75, 75, 75, 75, 77, 78, 80, 80, 80, 80, 81, 82, 83, 84

a) Make a dot plot using the number line below:



b) Would you describe this data distribution as approximately symmetric or as skewed?

Skewed left (B/c of the outlier 61) (Bi-modal)

c) What is the spread (range) of the data?

$84 - 61 = [23]$

d) What is the mode and the median for this data set?

mode:  $[75 \text{ \& } 80]$  median  $[76]$   $\frac{20}{2} = 10$

e) What is the best measure of central tendency to describe this data?

Median B/c of the outlier 61

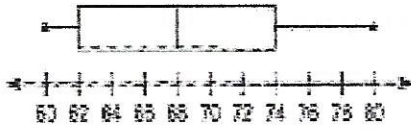
3. The heights, in inches, of the players on the Bluebirds baseball team are:

62, 64, 64, 65, 67, 67, 68, 68, 69, 70, 70, 70, 71, 73, 74

5# Summary  
 min 62  
 Q<sub>1</sub> 65  
 med 68  
 Q<sub>3</sub> 70  
 max 74

The manager determined that the team's lower quartile height is 65 inches, the median height is 68 inches, and the upper quartile height is 70 inches. Which box plot represents the heights of the Braves baseball players?

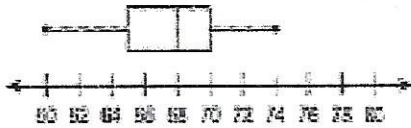
A. Bluebirds Player Height (in inches)



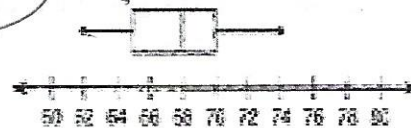
C. Bluebirds Player Height (in inches)



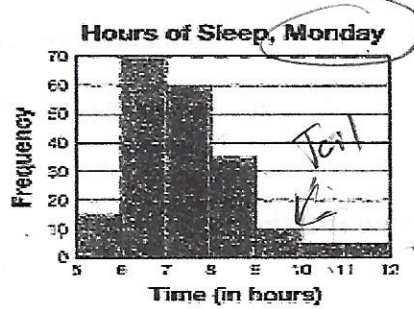
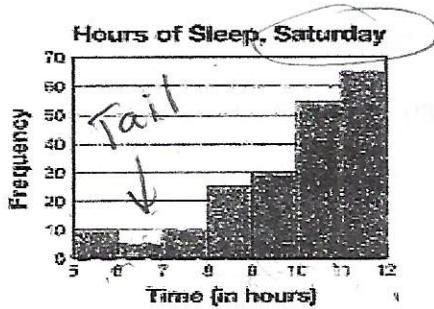
B. Bluebirds Player Height (in inches)



D. Bluebirds Player Height (in inches)



4. Skylar surveyed 200 high school students to find out how many hours they slept this past Saturday night and how many hours they slept this past Monday night. The histograms show the data she collected.

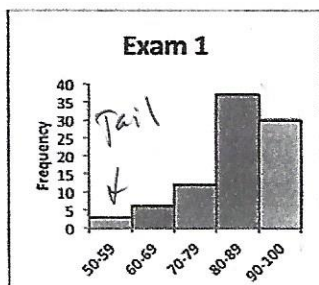


Compare the distributions of data on the two graphs. How do they differ? For what reason could they be so different? Explain.

The hours of sleep Saturday is skewed left showing that they sleep more hours vs. the hours of sleep Monday is more skewed right showing that they sleep less hours. Students have to go to school Tuesday so they would get less sleep when they don't on Sun! and can sleep more!

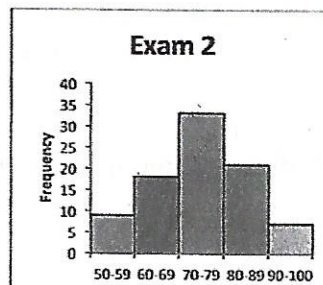
5. Describe the shapes of distributions for the following histograms.

a)



• Skewed left  
 (NOT symmetric)

b)



• Unimodal  
 • symmetric  
 (Bell shaped)