

1. An office supply catalog gives a description of bookshelves that includes the following information. Label each as variable as categorical or quantitative.

- a. The width of the shelf in inches _____
- b. The length of the shelf in feet _____
- c. The color of the bookshelf _____
- d. The height of the shelf in centimeters _____

2. The following chart shows the marital status of 192 million Americans age 18 and older. Construct a pie chart that shows the percentages.

<u>Marital Status</u>	<u>Count (in millions)</u>
Never married	44
Married	117
Widowed	13
Divorced	18

3. The following numbers are the number of home runs hit by 20 major league first basemen during the 1929 season. Make a histogram of the information using a class width of 6. (Hint: 7 bars)

20	19	30	60
20	19	29	29
22	21	40	39
33	34	32	43
36	33	42	37

4. Look at the histogram in #3 and answer the following questions:

a. Is the histogram skewed to the right or the left? _____

b. Does an outlier exist? (yes or no) _____

5. The following list of data displays the number of home runs hit by Robin Yount (Hall of Fame shortstop for the Milwaukee Brewers 1974-1993) in each of his 20 seasons.

3	8	2	4	9	8	23	10	29	17
16	15	9	21	13	21	17	10	8	8

a. Design a split stem plot of the observations.

b. What is the mean of the home runs? _____

c. List the five-number summary: _____

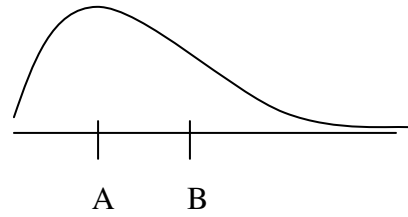
6. Design a boxplot showing the five-number summary.

7. What does it mean to say that the mean is “not resistant” and the median “is resistant?”

8. The following curve shows a skewed distribution. Which point on the curve is the median and which is the mean?

A = _____

B = _____



9. The following numbers are the wins per season for Warren Spahn (pitcher, 1942, 1946-1965).

0	8	21	21	21	2	14	23	21	17
20	21	21	21	18	23	6	4	3	

a. Calculate the standard deviation of the observation (df = n-1).

s = _____

b. What is the variance of the observations? _____

10. Using the 68-95-99.7 rule, suppose that a mean score is 90 with a standard deviation of 1. What percentage of scores will be less than 87 and more than 93?

The birthrates at a local hospital have a normal distribution with a mean of 110 oz. and a standard deviation of 15 oz. Use this information and Table A to answer questions 11-13.

11. What percentage of the infants weigh less than 90 oz.?
(make sure and sketch the curve)

12. What must an infant weigh to be in the top five percent of birthweights?
(make sure and sketch the curve)

13. What percentage of birthweights is between 80 and 155 oz.?

14. Typing times for employees has a mean of 90 minutes and standard deviation of 18 minutes.
What percentage of employees can do it under an hour?

Bonus: What percentage of scores lie between two standard deviations of the mean using Table A? What percentage of scores lie between three standard deviations using Table A?