Day 2 - Homework Answers:

11. 41%

12. 29%

13. Urbandale

14. Both are in the 7-8 hour range

15. 20%

16. a and b are both quantitative

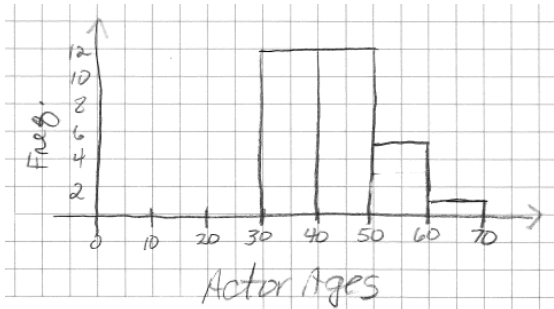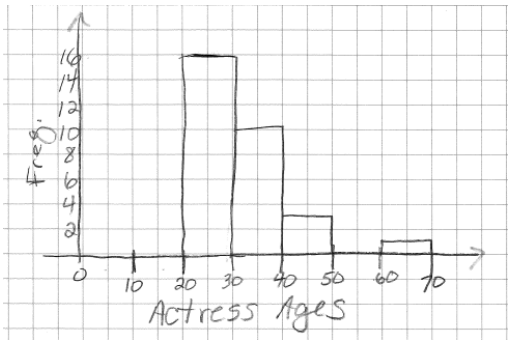   c. sleep time is continuous

    d. word count is discrete

17. See Histograms (next slide)

18. At the Oscars between 1928 and 1957, men tended to win Best Actor awards in their 30's - 50's, whereas women tended to win Best Actress awards in their 20's - 30's.

#17

age	Actress Tally	Actress Freq.	Actor Tally	Actor Freq.
0-9		0		0
10-19		0		0
20-29	ЦHT ЦHT HHT I	16		0
30-39	ЦHT ЦHT	10	ЦHT ЦHT II	12
40-49	III	3	ЦHT HHT II	12
50-59		0	HHT	5
60-69	I	1	I	1
		30		30

Actress Ages

Actor Ages

KEY TERMS

A **variable** describes some characteristic of interest that can vary in value. Some variables are **categorical** (soldiers' gender – male or female). Others are **quantitative** (soldiers' head circumference or foot length).

The **distribution** of a variable describes the possible values the variable takes and how often it takes these values. Stemplots are one way to graph the distribution of a quantitative variable.

Shape, center, and spread describe the overall pattern of the distribution of a quantitative variable. Some distributions have simple shapes, such as **unimodal** (single peak) or **symmetric** (one side is the mirror image of the other).

Outliers are data values that lie outside the overall pattern of the distribution. Always look for gaps in the data and outliers and try to explain them.

A **stemplot** (or **stem-and-leaf plot**) is a useful tool for conveying the shape of relatively small datasets and identifying outliers. It consists of two columns, one for the stems and the other for the leaves (often separated by a vertical line).

Survey Results:

1. Gender/$ on you now?

F: 90, 10, 0, 5, 0, 15, 6, 0, 0, 0, 90, 20
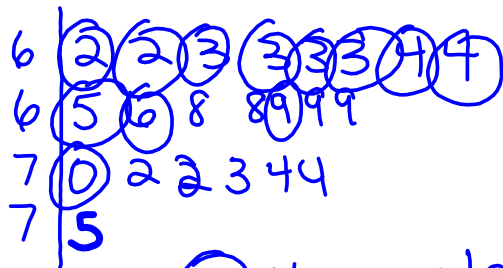
M: 0, 0, 430, 0, 100, 700, 1, 120, 40

Stemplot: Back to Back Stemplot:

2. Height (inches)
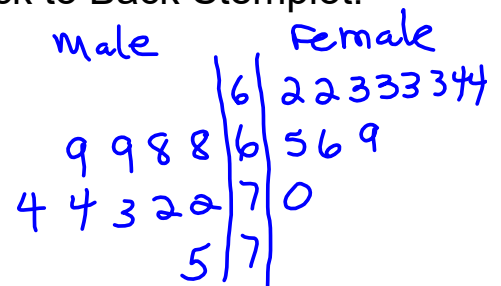
M: 74, 74, 72, 68, 75, 73, 72, 68, 69, 69

F: 6̶1̶.̶5̶ **63**, 63, 63, 64, 62, 66, 63, 6̶3̶.̶5̶ **64**, 65, 69, 70, 63

Stemplot:

```
6 | 2  2  3  3  3  3  4  4
6 | 5  6  8  8  9  9
7 | 0  2  2  3  4  4
7 | 5
```

⊛ Key: 6|2 = 62"

Back to Back Stemplot:

```
   Male              Female
              6 | 2 2 3 3 3 3 4 4
     9 9 8 8  6 | 5 6 9
   4 4 3 2 2  7 | 0
          5   7 |
```

Key: 6|2 = 62"

3. Study (minutes)

F: 20, 30, 60, 20, 60, 60, 40, 30, 80, 18, 30, 60

M: 40, 15, 45, 10, 15, 60, 30, 30, 60, 15

4. Exercise (min.)

M: 0, 30, 60, 0, 150, 30, 40, 60, 90, 120

F: 20, 15, 30, 45, 38, 120, 90, 90, 15, 80, 120, 10

<u>Homework:</u> Exercises Problem #3

(packet pg. 14-15)