

AP STATS: Do Now

Activity 1: Your pulse rate provides valuable info about the health of your heart. Take your pulse by taking your index and middle finger and placing them firmly on the inside of your wrist. Count the number of beats in 1 minute.



Chapter 1

- ❁ The preliminary chapter gave us a look at an overview of the 4 units you will cover in statistics (analyzing data, producing data, probability, and inference).
- ❁ Chapter 1 takes a look at exploring data (primarily different graphical displays).

Bar Graphs and Circle Graphs

Used to display the distribution of a categorical variable clearly.

Radio station formats Bar graphs and pie charts

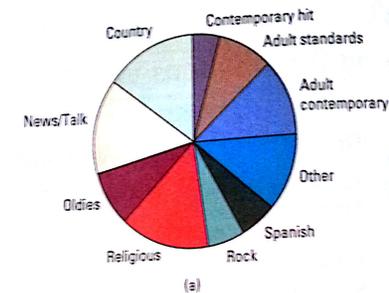
The radio audience rating service Arbitron places the country's 13,838 radio stations into categories that describe the kind of programs they broadcast. Here is the distribution of station formats:¹

Format	Count of stations	Percent of stations
Adult contemporary	1,556	11.2
Adult standards	1,196	8.6
Contemporary hit	569	4.1
Country	2,066	14.9
News/Talk/Information	2,179	15.7
Oldies	1,060	7.7
Religious	2,014	14.6
Rock	869	6.3
Spanish language	750	5.4
Other formats	1,579	11.4
Total	13,838	99.9

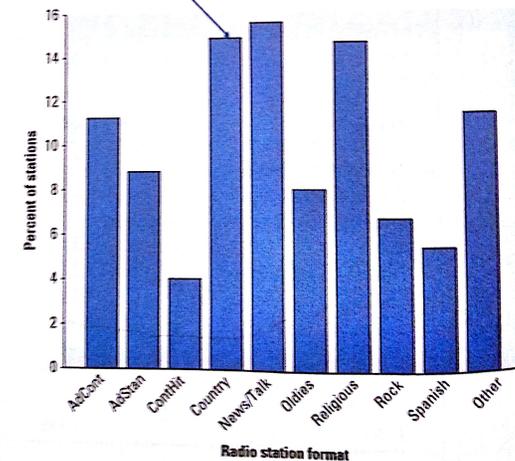
Generated by CamScanner from intsig.com

Figure 1.1

(a) Pie chart of radio stations by format. (b) Bar graph of radio stations by format.



This bar has height 14.9% because 14.9% of stations fit the "Country" format.



Generated by CamScanner from intsig.com

Stem Plots

Give a quick picture of the distribution. Work best for small numbers of observation

To Make a Stemplot:

- 1.) Separate each observation into a stem consisting of all but the final digit.
- 2.) Write the stems in the vertical column with the smallest at the top.
- 3.) Write each leaf in the row to the right of its stem, in increasing order from the stem

NOTE: Stemplots don't work well for large

Example:

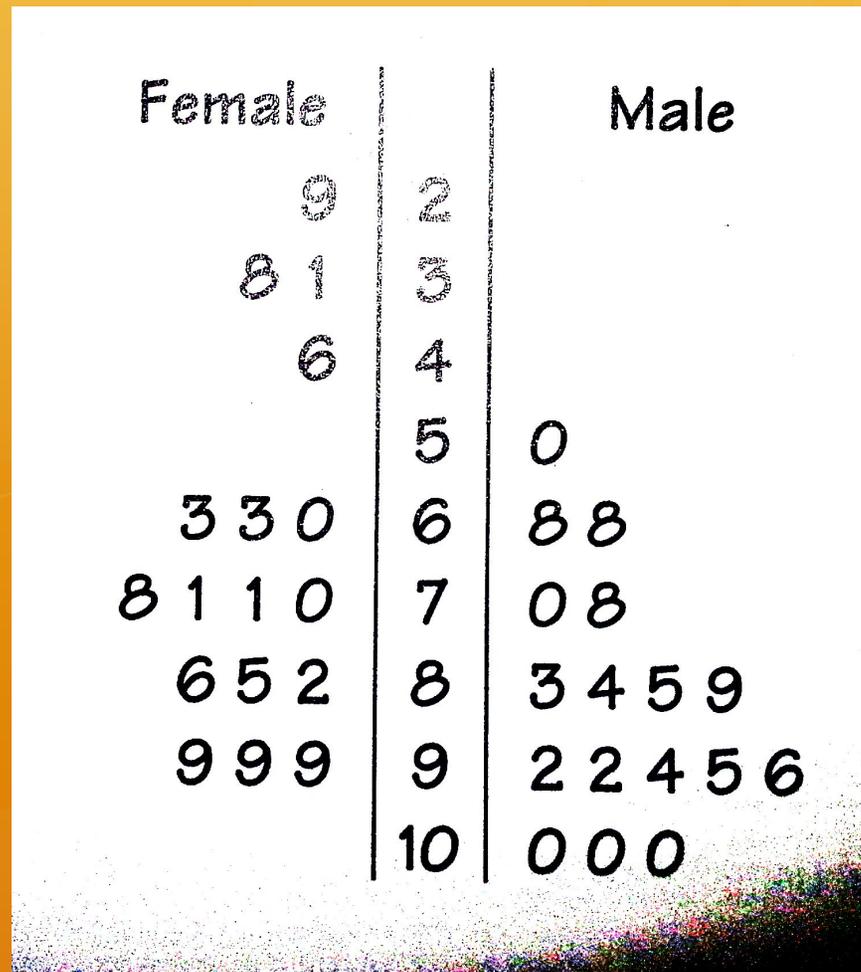
- ✿ Make a stemplot of the percents of females who are literate in the countries below (all participants were above 15 years old).

Table 1.1 *Literacy rates in Islamic nations*

Country	Female percent	Male percent	Country	Female percent	Male percent
Algeria	60	78	Morocco	38	68
Bangladesh	31	50	Saudi Arabia	70	84
Egypt	46	68	Syria	63	89
Iran	71	85	Tajikistan	99	100
Jordan	86	96	Tunisia	63	83
Kazakhstan	99	100	Turkey	78	94
Lebanon	82	95	Uzbekistan	99	100
Libya	71	92	Yemen	29	70
Malaysia	85	92			

Comparing Two Related Distributions

❁ Back to Back Stemplots:



Activity:

On the next slide, you will see an image where there is a man's head embedded in the picture.

When I say, I will flip the slide. When you find the man's head, quietly mark on Your card how many seconds it took you to find it. We will then make a Back to back stemplot of the data looking at males versus females.

Find the Man's Head!



Make a back to back stemplot of the data we collected for time to find the man's head (male vs. female)

Trimming and Splitting

- ❁ When a data set has a lot of values we might “trim” them by removing the last digit(s). Note :that the number is not rounded off. i.e. 34,850 could be made with a stem of 3 and a leaf of 4
- ❁ We also might split the leaves into 0-4 and 5-9 if there are many leaves on each stem.

Dot Plots

Displays a dot for each observation along a number line. If there are multiple occurrences of a value, the dots are stacked.

HW #7

- ✿ Read Pages 37-46 in your textbook.
- ✿ Complete exercises 1.1-1.6 (pg. 46-48)