Discussion: Activity with cards.

Activity 1. Groups. Read the definition of statistically significant in the orange box on p. 401. Discuss the two questions in Example 1. Then discuss these examples:

a. I roll a pair of dice once and get a score of 12. Is this statistically significant?
b. I roll a pair of dice 3 times in a row. The total score on each was 12. Is this statistically significant?
c. In a city where the average annual rainfall is 33.6 inches of rain per year, with a standard deviation of about 3 inches per year, if a year has 22.73 inches of rain, is that statistically significant?
d. In a city where the average annual rainfall is 33.6 inches of rain per year, with a standard deviation of about 10 inches per year, if a year has 22.73 inches of rain, is that statistically significant?
e. The annual rainfall for Austin for the last 35 years fits either c. or d. here. Which do you suppose it is?

Next, read Example 2 on p. 402 and discuss it with each other before you read the solution.

Discussion. Quantifying statistical significance. People use different levels for saying something is statistically significant at different times. Deciding on a level for a particular problem is more complex than we will discuss in this course. Generally speaking, written reports use a 5% level unless there is some reason to choose a different one.

Your opinion: What was YOUR level of statistical significance for the card activity at the beginning of class?

Activity 2. Groups. Discuss the paragraph at the end of p. 402 through Example 3 on p. 403. Then do Quick Quiz on p. 409. Questions 1-4.

Discussion: Estimating a proportion. (Margin of error and confidence intervals.)

Activity 3. Groups. Work the problems in Examples 4 and 5 and then work on the Quick Quiz on p. 409. Questions 5-7.

Discussion. Hypothesis Testing. P. 406- 407. Setting up the hypotheses and understanding the meaning of the two possible outcomes.

Activity 4. Groups. After reading Examples 6 and 7, do Quick Quiz 8-9.

Discussion. Gathering data and concluding a hypothesis test. p. 408.

Activity 5. Groups. After reading Example 8, do Quick Quiz 10.

Reminder: HW 14 Due Wed. May 1. (This is the last homework and quiz.)
5E: 1-6, 13, 15, 17, 19, 25, 29, 31, 33, 35, 39
6D: 1, 9, 10, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 45, 49
Quiz 14:
5E 10, 12, 18, 20, 30(spreadsheet)
6D: 12, 14, 16, 18, 20, 22, 24, 26, 28, 30