1. Percentage vs. Probability

- (a). Can you have a probability of over 100%? If so, give an example where you might encounter it. If not, explain the reason why.
- (b). Can you have a percentage over 100%. If so, give an example where you might encounter it. If not, explain the reason why.

(c). Convert the following decimal 0.573 to a percentage.

2. Suppose 300 people are surveyed and 120 of them state that they can waterski. The rest state that they do not waterski.

(a). What is the probability that a person in this survey can waterski?

- (b). What is the probability that a person in this survey can not waterski?
- (c). Is it likely that a randomly chosen respondent in this survey can waterski?

**3.** Suppose 500 people are surveyed and 400 of them are between 5 feet and 6 feet tall. 80 of them are over 6 feet tall.

(a). What is the probability that a person in this survey is over 6 feet tall?

(b). What is the probability that a person in this survey is under 6 feet tall?

(c). What is the probability that a person in this survey is under 5 feet tall?

(d). What is the probability that a person in this survey is over 5 feet tall?

4. Suppose 1000 people are surveyed and the results are given in the following table.

		Can play an instrument?	
		Yes	No
Can Sing?	Yes	227	401
	No	124	248

(a). What is the probability that a person in this survey can play an instrument?

(b). What is the probability that a person in this survey cannot play an instrument?

(c). What is the probability that a person in this survey can play an instrument and sing?

(d). What is the probability that a person in this survey cannot play an instrument but can sing?

5. Suppose you roll a standard 6-sided die and flip an ordinary coin and record the results.

(a). Create the sample space for this experiment.

(b). What is the probability of rolling a 2 and getting tails?

(c). What is the probability of rolling a 2 <u>or</u> getting tails?

(d). What is the probability of rolling a 2? Explain why you can answer this without using part a.

Homework: Section 4.2, p. 146: #2, 5, 12, 13-19(odd), 22, 23, 25, 28, 31, 33, 34