

A.P. Statistics
Assignment 4.2

Remember to show your thinking through your work.

1) For each of the following, describe the sample space, S .

a) A mother has a child; it is either a boy or a girl.

b) A cancer patient is treated with a new type of treatment; the response variable is the length of time the patient lives after the treatment.

c) An A.P. Statistics student receives a grade at the end of the semester.

d) A basketball player shoots four free throws. The number of makes is recorded.

e) A basketball player shoots four free throws. The sequence of makes and misses is recorded.

f) Toss a coin 4 times and record the results.

- 2) Use your counting principles to determine each of the following.
- a) Washington state license plates for cars consist of 3 numbers followed by 3 letters. How many license plates are there? Do not consider vanity plates or other oddities.

- b) Some lottery tickets consist of six numbers each ranging from 1 to 40. How many different tickets are there?

- c) How many telephone numbers are there in the 509 area code. Telephone numbers may not start with the number 0 or 1. They also must not begin with 911 or 555. Do not consider other special circumstances.

- 3) Consider rolling two dice and examining their sum.
- a) Fill in the table showing the sample space.

	1	2	3	4	5	6
1						
2						
3						
4						
5						
6						

- b) When rolling, what is the probability of getting an odd number?

- c) When rolling, what is the probability of rolling a 10?

- d) When rolling, what is the probability of rolling a 7?

4) You select a card at random from a standard deck of 52 cards. In how many ways can you select a...

a) a black card?

b) a spade?

c) a jack?

d) a black jack?

e) a face card (jack, queen, or king) that is not a heart?