

## Review Problems for Final Exam

1. An experiment assigns different combinations of dosages of Vitamins C and E to determine their effect on health. The 3 dosages of Vitamin C are 0 mg, 250 mg, and 500 mg. The 2 dosages of Vitamin E are 0 mg and 400 mg.

a. Determine the factors and treatments for this experiment.

b. Outline the design for this experiment.

2. You flip a fair coin 4 times and observe the order of heads and tails.

a. What is the sample space?

b. What is the probability of getting exactly 3 heads?

c. What is the probability of getting exactly 2 heads?

d. What is the probability of getting either 2 or 3 heads?

e. What is the probability of getting 0, 1, or 4 heads?

3. According to a recent *Current Population Reports*, the population distribution of number of years of education for self-employed individuals in the United States has a mean of 13.6 and a standard deviation of 3.0. Find the approximate probability that when 400 self-employed individuals are chosen at random, the average of their years of education is at least 14.

4. For the following data, find the equation of the regression line.

Number of 60-lb bench presses	Maximum bench press (in pounds)
10	80
12	85
20	85
5	65