You take a multiple choice exam that has 100 questions. Each question has 5 possible choices, with 1 correct answer. You didn't study, so you have to randomly guess the answer.

1. Label n, p, q

2. What is the probability of getting a C (70) or above?

3. What's the probability of scoring 50 or above correct?

4. Compute the average score you would get by guessing.

5. Compute the standard deviation?

False positives on a polygraph test (individual fails, even though he/she is telling the truth) are relatively common and occur about 15% of the time. Suppose that such a test is given to 10 trustworthy individuals.

a. What's the probability that they all pass?

b. What's the probability that more than two fail?

c. Suppose 500 Police officers were required to take the test. If all 500 were trustworthy, what are the mean and standard deviation.

d. What would be a normal range, of officers that fail the test?

About 37% of credit card users pay their bills in full each month. A random sample of 25 cardholders are selected.

1. Label n, p, q

2. What's the probability that at most, 7 of them paid their bill in full.

3. What's the probability that at least 20 of them paid their bill in full.

4. Out of 25 people, how many should we expect to pay their bill in full?