1. The average outstanding credit card balance for young couples is $650 with a standard deviation of $420.
2. What is the probability that a couple chosen at random has a credit card balance exceeding $700?
3. What is the probability that a random sample of 100 young couples have a mean credit card balance exceeding $700?
4. What is the probability that a random sample of 200 young couples have a credit card balance totaling less than $125,000?
5. The probability that 50 randomly chosen young couples have an average credit card balance greater than a certain average is 0.29. What is the average amount?

1. The probability that 50 randomly chosen young couples have an average credit card balance less than a certain average is 0.37. What is the average amount?
2. An agent sells life insurance policies to five equally aged, healthy people. According to recent data, the probability of a person living for 30 years or more is 2/3.
   1. Define the random variable X to be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   2. X has a binomial distribution with parameters \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Calculate the probability that after 30 years…

* 1. All five people are still living.
  2. At least three people are still living.
  3. At most two people are still living.

1. A pharmaceutical lab states that a drug causes negative side effects in 3 of every 100 patients. If the lab chooses 100 patients at random, what is the mean and standard deviation of the distribution? Interpret these parameters in terms of the situation.
2. A bank found that 25% of its loans to new small businesses become delinquent. If 500 small businesses are selected randomly from the bank’s files, what is the probability that at least 130 of them are delinquent?