

Homework

State whether A and B are independent or dependent.

1. A single coin is tossed twice. Event A is having the coin land heads up on the first toss. Event B is having the coin land tails up on the second toss.
2. Two cards are drawn from a standard 52-card deck. The first card is not placed back in the deck before the second card is drawn. Event A is drawing a queen for the first card. Event B is drawing a king for the second card.
3. Two cards are drawn from a standard 52-card deck. The first card is placed back in the deck before the second card is drawn. Event A is drawing a queen for the first card. Event B is drawing a king for the second card.
4. You buy one state lottery ticket this week and one next week. Event A is winning the lottery this week. Event B is winning the lottery next week.

Homework

Each drawer in a file cabinet that has 4 drawers has 100 folders. You are searching for some information that is in one of the folders, but you do not know which folder has the information.

What is the probability of the following:

5. The information is in the first drawer you choose?
6. The information is not in the first folder you choose?
7. The information is not in the first six folders you choose?

Homework

8. The probability of selecting a rotten apple from a basket is 12%. What is the probability of selecting three good apples when selecting one from each of the three different baskets?
9. Find the probability of drawing the given cards from a standard 52-card deck of cards.
 - a. a face card, then an ace (without replacement)
 - b. a 2, then a 10 (with replacement)
 - c. an ace, then a face card, then a 7 (without replacement)
 - d. a king, then a 2nd king, then a 3rd king (with replacement)

Homework

10. A jar contains 12 red marbles, 16 blue marbles, and 18 white marbles. Find the probability given the following:
 - a. Three marbles are chosen from the jar without replacement. What is the probability that none are white?
 - b. Four marbles are chosen from the jar with replacement. What is the probability that all are white?
 - c. Three marbles are chosen from the jar without replacement. What is the probability that at least one is white?