Probability Homework Independent and Dependent Events
Algebra 2

1. Hal tosses a quarter three times. What is the probability the result will be tails each time?
2. Katie rolls a 1–6 number cube twice. What is the probability she will roll an odd number and then an even number?
3. Katie rolls the 1–6 number cube three times. What is the probability that the result will be a 3 each time?

There are 3 apples and 5 oranges in a bag. Determine each probability.
4. Selecting 2 apples when they are chosen at random without replacement
5. Selecting an orange, then an apple when they are chosen at random without replacement

There are 4 green marbles and 3 white marbles in a bag. A white marble is randomly selected and not replaced. Then a green marble is randomly selected.
6. Are these events dependent or independent?
7. What is the probability of this event occurring?

Find each probability.
8. A bag contains 5 red, 3 green, 4 blue, and 8 yellow marbles. Find the probability of randomly selecting a green marble, and then a yellow marble if the first marble is replaced.
9. A sock drawer contains 5 rolled-up pairs of each color of socks, white, green, and blue. What is the probability of randomly selecting a pair of blue socks, replacing it, and then randomly selecting a pair of white socks?

A bag contains 12 blue cubes, 12 red cubes, and 20 green cubes. Determine whether the events are independent or dependent, and find each probability.
10. A green cube and then a blue cube are chosen at random with replacement.
11. Two blue cubes are chosen at random without replacement.

Two cards are drawn from a standard deck of cards. Find each probability if no replacement occurs.
12. P (2 hearts)
13. P (ace, then king)

A bag contains 6 purple marbles, 8 yellow marbles, and 5 blue marbles. If 2 marbles are randomly chosen without replacement, find each of the probabilities.
14. P (2 purple)
15. P (2 blue)
16. P (yellow then purple)
17. P (blue then yellow)