

Summary

Two devices can be used to represent sample spaces. They are tree diagrams and tables.

A tree diagram can be used to determine the outcome of a probability experiment. A tree diagram consists of branches corresponding to the outcomes of two or more probability experiments that are done in sequence.

Sample spaces can also be represented by using tables. For example, the outcomes when selecting a card from an ordinary deck can be represented by a table. When two dice are rolled, the 36 outcomes can be represented by using a table. Once a sample space is found, probabilities can be computed for specific events.

QUIZ

1. When a coin is tossed and then a die is rolled, the probability of getting a tail on the coin and an odd number on the die is
 - a. $\frac{1}{2}$
 - b. $\frac{1}{4}$
 - c. $\frac{3}{4}$
 - d. $\frac{1}{12}$
2. When a coin is tossed and a die is rolled, the probability of getting a head and a number less than 5 on the die is
 - a. $\frac{1}{3}$
 - b. $\frac{2}{3}$
 - c. $\frac{1}{2}$
 - d. $\frac{5}{6}$

3. When three coins are tossed, the probability of getting at least one tail is
- a. $\frac{3}{8}$
 - b. $\frac{1}{8}$
 - c. $\frac{7}{8}$
 - d. $\frac{5}{8}$
4. When three coins are tossed, the probability of getting two or more heads is
- a. $\frac{3}{8}$
 - b. $\frac{1}{8}$
 - c. $\frac{1}{2}$
 - d. $\frac{7}{8}$
5. A box contains a penny, a nickel, a dime, and a quarter. If two coins are selected without replacement, the probability of getting an amount greater than 11¢ is
- a. $\frac{5}{72}$
 - b. $\frac{2}{3}$
 - c. $\frac{3}{4}$
 - d. $\frac{5}{6}$

6. A bag contains a red bead, a green bead, and a blue bead. If a bead is selected and its color noted, and then it is replaced and another bead is selected, the probability that both beads will be of the same color is
 - a. $\frac{1}{8}$
 - b. $\frac{3}{4}$
 - c. $\frac{1}{16}$
 - d. $\frac{1}{3}$

7. A card is selected at random from an ordinary deck of 52 cards. The probability that the 7 of diamonds is selected is
 - a. $\frac{1}{13}$
 - b. $\frac{1}{4}$
 - c. $\frac{1}{52}$
 - d. $\frac{1}{26}$

8. A card is selected at random from a deck of 52 cards. The probability that it is a 7 is
 - a. $\frac{1}{4}$
 - b. $\frac{1}{52}$
 - c. $\frac{7}{52}$
 - d. $\frac{1}{13}$

9. A card is drawn from an ordinary deck of 52 cards. The probability that it is a spade is
- a. $\frac{1}{4}$
 - b. $\frac{1}{13}$
 - c. $\frac{1}{52}$
 - d. $\frac{1}{26}$
10. A card is drawn from an ordinary deck of 52 cards. The probability that it is a 9 or a club is
- a. $\frac{17}{52}$
 - b. $\frac{5}{8}$
 - c. $\frac{4}{13}$
 - d. $\frac{3}{4}$
11. A card is drawn from an ordinary deck of 52 cards. The probability that it is a face card is
- a. $\frac{3}{52}$
 - b. $\frac{1}{4}$
 - c. $\frac{9}{13}$
 - d. $\frac{3}{13}$

12. Two dice are rolled. The probability that the sum of the spots on the faces will be nine is
- a. $\frac{1}{9}$
 - b. $\frac{5}{36}$
 - c. $\frac{1}{6}$
 - d. $\frac{3}{13}$
13. Two dice are rolled. The probability that the sum of the spots on the faces is greater than seven is
- a. $\frac{2}{3}$
 - b. $\frac{7}{36}$
 - c. $\frac{3}{4}$
 - d. $\frac{5}{12}$
14. Two dice are rolled. The probability that one or both numbers on the faces will be 4 is
- a. $\frac{1}{3}$
 - b. $\frac{4}{13}$
 - c. $\frac{11}{36}$
 - d. $\frac{1}{6}$

15. Two dice are rolled. The probability that the sum of the spots on the faces will be even is

- a. $\frac{3}{4}$
- b. $\frac{5}{6}$
- c. $\frac{1}{2}$
- d. $\frac{1}{6}$