

Probability Homework: Mutually Exclusive and Inclusive Events And Complement Probability

Algebra 2

1. CDs are in $\frac{1}{4}$ of all of the bags that are distributed at a party, and DVDs are in $\frac{1}{3}$ of the bags.

What is the probability of randomly choosing a bag that contains either a CD or a DVD?

2. A store gave away T-shirts with their store logo on them. Red T-shirts were chosen by 25% of the customers, blue T-shirts were chosen by 60% of the customers, and black T-shirts were chosen by 15% of the customers. What is the probability that one randomly selected customer chose a red **or** black T-shirt?

3. Using a standard and fair six-sided die, what is the probability of rolling a 2 **or** a 5?

4. Using a standard and fair six-sided die, what is the probability of rolling an odd number **or** a number greater than 4?

5. A bag contains 4 blue marbles, 3 red marbles, and 2 yellow marbles. If a marble is randomly selected, what is the probability of selecting a red or a blue marble?

6. A card is drawn from a standard deck of cards. What is the probability of selecting an ace or a face card (King, Queen, Jack)?

7. On a certain day the chance of rain is 40% in Chicago and 20% in Los Angeles. Assume that the chance of rain in the two cities is independent. What is the probability that it will **not** rain in either city that day?

8. Using a standard and fair six-sided die, what is the probability of rolling at least a 2? (Hint: Use Complement Probability to find your answer.)

9. Using a standard and fair six-sided pair of dice, what is the probability of rolling at least a 3 as the sum of both dice? (Hint: Use Complement Probability to find your answer.)

10. Using a standard and fair six-sided die, what is the probability of rolling an even number **or** a number greater than 3?

Two cards are drawn from a standard deck of playing cards. Find each probability.

11. P(Queen or Face Card)

12. P(five or a club)

13. P(Ace or a red card)