

****Show work on your own paper and save this handout for reference.****

Give probabilities in simplest fractional form unless otherwise specified.

1. There are 3 green marbles, 7 red marbles, and 5 white marbles in a bag. Marbles are selected at random. Find the probability of each of the following.

- a. the chosen marble is white b. the chosen marble is red or white
c. the chosen marble is not red

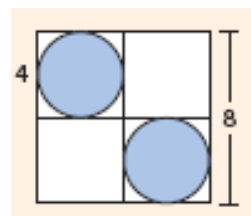
2. When 2 number cubes numbered 1-6 are rolled, what is the probability that the result will show a sum of 10 or greater?

3. Tom has a dollar's worth of dimes and a dollar's worth of nickels in his pocket. What is the probability he will randomly select a dime from his pocket?

4. The table shows the result of choosing one card from a deck of cards, recording the suit, and then replacing the card.

Card Suit	Hearts	Diamonds	Clubs	Spades
Number	5	9	7	5

- a. Find the experimental probability of choosing a diamond.
b. Find the experimental probability of choosing a card that is not a club.
5. Find the probability that a point randomly selected inside the figure will lie in either shaded circle. Give your answer as a decimal rounded to the nearest hundredth.



6. There are 7 books numbered 1-7 on the summer AP reading list. Lindsay randomly selects 2 books. What is the probability that he chooses books numbered 1 and 2?

7. A bag contains 3 red, 4 green, and 5 blue marbles. Three marbles are randomly selected all at once. Find the probability that:

- a. all 3 are green b. exactly one marble is red

8. Six books by authors with different last names are arranged on a shelf. What is the probability that the books are arranged in alphabetical order?

9. How many ways can 3 marbles be selected all at once from a bag containing 4 red and 5 green marbles if the 3 marbles must be the same color?

10. Fifteen students enter a photo contest. In how many ways can 1st, 2nd, and 3rd places be awarded, if each student may submit only one photo?