

Assignment

Write

Complete each statement using a term from the word box.

experiment	probability	event	equally likely
outcome	sample space	simple event	complementary events

1. A(n) _____ is one or a group of possible outcomes for a given situation.
2. A list of all possible outcomes of an experiment is called a(n) _____.
3. A(n) _____ is a situation involving chance that leads to results.
4. The measure of the likelihood that an event will occur is its _____.
5. The result of an experiment is a(n) _____.
6. An event consisting of one outcome is a(n) _____.
7. When the probability of all the outcomes of an experiment are equal, then the probabilities are called _____.
8. _____ are two events that together contain all of the outcomes in the sample space.

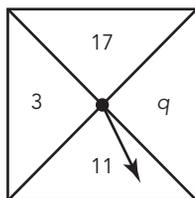
Remember

Probability is a measure of the likelihood that an event will occur. To calculate the probability of an event, or $P(\text{event})$, determine the ratio of the number of times the event occurs to the total number of outcomes.

Practice

1. Rasheed is getting dressed in the dark. He reaches into his sock drawer to get a pair of socks. He knows that his sock drawer contains six pairs of socks, and each pair is a different color. Each pair of socks is folded together. The pairs of socks in the drawer are red, brown, green, white, black, and blue.
 - a. How many possible outcomes are there in the experiment?
 - b. What are the possible outcomes of the experiment?
 - c. List the sample space for the experiment.
 - d. Calculate $P(\text{blue})$.
 - e. Calculate $P(\text{green})$.
 - f. Calculate $P(\text{not red})$.
 - g. Calculate $P(\text{not purple})$

2. Consider the square spinner shown and assume all sections are the same size. An experiment consists of spinning the spinner one time.



- How many possible outcomes are there in the experiment?
- What are the possible outcomes of the experiment?
- List the sample space for the experiment.
- Calculate $P(q)$.
- Calculate $P(\text{number})$.
- Calculate $P(\text{not a number greater than } 10)$.
- Calculate $P(\text{number less than } 2)$.

3. Determine whether each event is certain to occur, just as likely to occur as not to occur, or impossible to occur. Then write the probability.
- A coin is flipped and the coin lands heads up. Express the probability as a fraction.
 - Tuesday follows Monday in the week. Express the probability as a percent.
 - You have only white shirts in your closet. Express the probability of reaching into your closet and choosing a red shirt as a fraction.
 - A box contains 2 green balls and 2 yellow balls. You reach into the box and grab a yellow ball. Express the probability as a decimal.

Stretch

Create a spinner with 4 sections, A through D, so that each section has the given probability.

Section A: 10%
Section B: 20%

Section C: 30%
Section D: 40%

Review

- Cho is driving east from San Francisco along Route 80. The graph represents the relationship between the time that Cho has driven and the distance that she has driven.
 - How far does Cho drive in 5 hours?
 - How fast is Cho driving?
 - Write an equation to determine the number of hours that Cho drives for any number of hours. Be sure to define your variables.
- Louis is researching a type of fish called carp. He discovers that one variety of carp can grow 5 pounds during each year of its life. He decides to purchase a very young carp of this variety that weighs 2 pounds. Define variables and write an equation that represents the relationship between the amount of time in years that Louis has the carp and the weight of the carp.
- Solve each equation using any method.
 - $\frac{x}{3} + 2 = 14$
 - $6n - 13 = 27$

