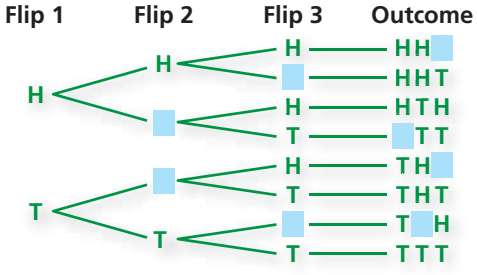
English Spanish

9.4 Exercises

Vocabulary and Concept Check

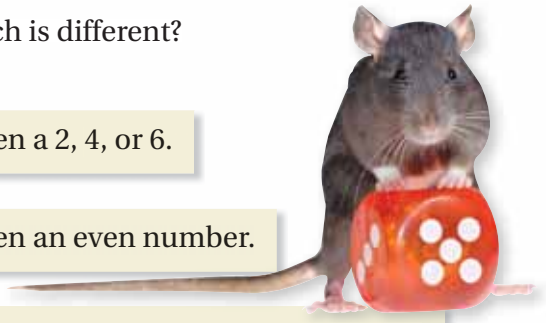
1. **VOCABULARY** Events A and B are independent. Describe two ways to find $P(A \text{ and } B)$.

2. **FILL IN THE BLANKS** Copy and complete the tree diagram to find the possible outcomes for flipping a coin three times.



3. **OPEN-ENDED** Describe a real-life example of two independent events. Describe a real-life example of two dependent events.

4. **DIFFERENT WORDS, SAME QUESTION** Which is different? Find "both" answers.



Find the probability of rolling a 1 and then a 2, 4, or 6.

Find the probability of rolling a 1 and then an even number.

Find the probability of rolling an odd number and then an even number.

Find the probability of rolling a number less than 2 and then an even number.

Practice and Problem Solving

Tell whether the events are *independent* or *dependent*. Explain.

1

5. You roll a number cube twice.

   First Roll: You roll a 4.
   Second Roll: You roll an even number.

6. You flip a coin twice.

   First Flip: Heads
   Second Flip: Heads

7. You randomly draw a marble from a bag containing 2 red marbles and 5 green marbles. You put the marble back and then draw a second marble.

   First Draw: Green Second Draw: Red

8. You randomly draw a marble from a bag containing 2 red marbles and 5 green marbles. You keep the marble and then draw a second marble.

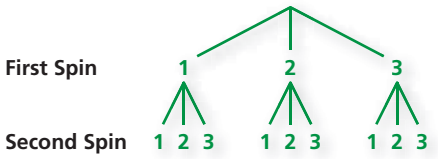
   First Draw: Green Second Draw: Red

9. You and your friend are in a drawing for two door prizes. You can win only one prize.

   First Draw: Your name is drawn. Second Draw: Your friend's name is drawn.

English Spanish

A spinner has three equal sections numbered 1, 2, and 3. You spin it twice. Use the tree diagram to find the probability of the events.



2 **10.** Spinning a 1 and then a 3

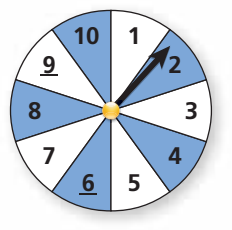
11. Spinning an odd number and then a 2

12. Spinning a 3 and then an even number

13. Spinning an even number and then an odd number

14. Spinning an odd number on each spin

You spin the spinner and flip a coin. Find the probability of the events.



15. Spinning a 4 and flipping heads

16. Spinning an even number and flipping tails

17. Spinning a multiple of 3 and flipping heads

18. Spinning white and *not* flipping tails

You randomly choose one of the lettered tiles. Without replacing the first tile, you choose a second tile. Find the probability of choosing the first tile, then the second tile.

3 **19.** R and N

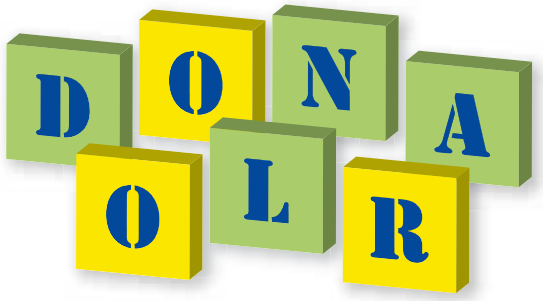
20. A and L

21. D and O

22. N and yellow

23. O and *not* yellow

24. *Not* O and O



25. If you randomly choose all seven tiles in order, what is the probability that you will spell the name of a city in Florida?

26. **EARRINGS** A jewelry box contains two gold hoop earrings and two silver hoop earrings. You randomly choose two earrings. What is the probability that both are silver hoop earrings?

27. **PASSWORD** You forgot the last two digits of your password for a website.

a. You choose a two-digit number at random. What is the probability that your choice is correct?

b. Suppose you remember that both digits are even numbers. How does this change the probability that your choice is correct?