

Practice 11.1

Tell whether each statement is **True** or **False**.

- 1 Selecting the letter A from the word PROBABILITY is a compound event.
- 2 Selecting the letter B from the word BASEBALL and then from the word ABLE is a simple event.
- 3 Tossing a fair six-sided number die to get either an even number or a five is a compound event.
- 4 Umberto has 3 red cards and 4 blue cards. Drawing two red cards in a row, without replacing the first card before drawing the second card, is a compound event.

Tell whether each event is a simple or compound event. If it is a compound event, identify the simple events that form the compound event.

- 5 Getting a 6 when a fair six-sided number die is rolled.
- 6 Rolling three fair six-sided number dice and obtaining a sum of 18 from the throws.
- 7 Getting an eighteen when a fair twenty-sided number die is rolled.




- 8 Susan has 3 red cards and 4 blue cards. She first draws a blue card. Without replacing the first card, she then draws another blue card.

Solve. Show your work.

- 9 In the top drawer, there are two battery-operated flashlights: red and yellow. In the second drawer, there are three packages of batteries: sizes AA, C, and D. A flashlight and a package of batteries are randomly selected.
 - a) Draw a possibility diagram to represent all possible outcomes.
 - b) How many possible outcomes are there?
- 10 Two electronic spinners, A and B, are spun by pressing a button. Spinner A has four sections labeled 1 to 4, while B has three sections, labeled 1 to 3. Spinner B, due to a technical error, will never land on number 2 if spinner A lands on a 4.
 - a) Draw a possibility diagram to represent all possible outcomes.
 - b) How many possible outcomes are there?

- 11 Winston has two boxes. The first box has 3 black pens and 1 red pen. The second box has 1 green ball and 1 yellow ball. Draw a tree diagram to represent all possible outcomes for randomly drawing a pen and a ball from each box. Then tell the number of possible outcomes.



- 12 Seraphina first tosses a fair six-sided number die. She then tosses a fair coin. Draw a tree diagram to represent all possible outcomes.
- 13 A game was designed such that a participant needs to accomplish 2 rounds to be considered the overall winner. The first round is to roll a 4 from a fair four-sided number die labeled 1 to 4. The result recorded is the number facing down. The second round is to randomly draw a red ball from a box of 2 differently colored balls.
- Draw a tree diagram to represent all possible outcomes.
 - How many possible outcomes are there?
 -  *Math Journal* If the participant first draws the colored ball and then rolls the four-sided number die, will the number of possible outcomes be the same? Draw a tree diagram to explain your reasoning.
- 14 Zoe first rolls a fair four-sided number die labeled 1 to 4. Then she rolls another fair four-sided number die labeled 2 to 5. The results recorded are the numbers facing down.



- Draw a possibility diagram to find the number of favorable outcomes for an odd sum.
- Draw a possibility diagram to find the number of favorable outcomes for a difference greater than 2.