

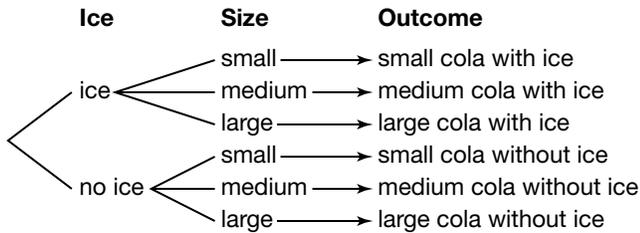
Tree Diagrams

(pages 534–536)

One way to find possible outcomes and probability is with a **tree diagram**.

EXAMPLE

At a concession stand, you can order a small, medium, or large cola, with or without ice. Use a tree diagram to find the number of possible outcomes.



Try These Together

For each situation, use a tree diagram to find the total number of outcomes.

- choosing white or rye bread with either ham, turkey, or salami
- going in-line skating or biking to either the library, grocery store, or the mall
- buying a sweater or a shirt in either orange, blue, turquoise, or red

HINT: Each of the two objects in the first set goes with each of the objects in the second set.

PRACTICE

For each situation, use a tree diagram to find the total number of outcomes.

- growing tulips, roses, or daisies in either pink, white, or yellow
- taking a sculpture or woodworking class at either a school, a community center, or a museum
- sitting in a room with a sofa, a chair, a love seat or a recliner, in either a soft, hard, or medium firmness
- Music** You are in charge of music for a party. You bring three CDs: pop, jazz, and country. How many different ways can you play all three CDs so that each one is played exactly once?



8. **Standardized Test Practice** A baseball manager has four possible starting pitchers for a game. He also must decide which of two catchers to put in the starting lineup. How many ways can he choose the players for these two positions?

A 6

B 8

C 9

D 16

Answers: 1. 6 2. 6 3. 8 4. 9 5. 6 6. 12 7. 6 8. B