Name_____ Date _____

## 5.2 Practice B

**In Exercises 1 and 2, tell whether the events are independent or dependent. Explain your reasoning.**

1. You and a friend are picking teams for a softball game. You randomly choose a player. Then your friend randomly chooses a player.

   **Event A:** You choose a pitcher.

   **Event B:** Your friend chooses a first baseman.

2. You are making bracelets for party favors. You randomly choose a charm and a piece of leather.

   **Event A:** You choose heart-shaped charm first.

   **Event B:** You choose a brown piece of leather second.

**In Exercises 3 and 4, determine whether the events are independent.**

3. You are playing a game that requires flipping a coin twice. Use a sample space to determine whether flipping heads and then tails are independent events.

4. A game show host picks contestants for the next game from an audience of 5 females and 4 males. The host randomly chooses a male, and then randomly chooses a male. Use a sample space to determine whether randomly choosing a male first and randomly choosing a male second are independent events.

5. A sack contains the 26 letters of the alphabet, each printed on a separate wooden tile. You randomly draw one letter, and then you randomly draw a second letter. Find the probability of each pair of events.

   a. You replace the first letter before drawing the second letter.

      **Event A:** The first letter drawn is T.

      **Event B:** The second letter drawn is A.

   b. You do not replace the first letter tile before drawing the second letter tile.

      **Event A:** The first letter drawn is P.

      **Event B:** The second letter drawn is S.

6. At a high school football game, 80% of the spectators buy a beverage at the concession stand. Only 20% of the spectators buy both a beverage and a food item. What is the probability that a spectator who buys a beverage also buys a food item?