LESSON 11.5 **Real-Life Application: When Will I Ever Use This?**

For use with the lesson "Find Probabilities of Independent and Dependent Events"

Card Collecting

Collecting trading cards has been a hobby since the 1860s, when the first baseball cards were printed. The trading card industry has since grown to include other sports, like basketball, hockey, and football, as well as video games, role-playing games, comic book characters, and kid's characters. There are hundreds of different types of trading cards, with new ones coming out every year.

Card collecting ranges from the light hobbyist to the serious enthusiast to the die-hard collector. Values of cards vary from pennies to millions of dollars depending on factors like the player, print run, number of cards in circulation, and errors. In 2007, a Honus Wagner baseball card sold for a record $2.8 million.

Use the information below for Exercises 1–3.

You are trying to finish your collection of this year's baseball cards. The set has 330 base cards in it. Each pack has 10 cards in it. You are looking for card #145.

1. What is the probability that one pack will contain your card?

2. Fill in the table with the probability of getting the card you need depending on the number of packs you purchase.

Number of Packs	Probability
1	
2	
3	
4	
5	
6	

3. What is the probability that you will get your card in the first pack you open and then again in the second pack?

4. How many packs should you buy to have a theoretically guaranteed chance to get your card?