Math in Focus
Singapore Math
by Marshall Cavendish

Family Letters and Activities

Chapter 10 Probability

Dear Family,

In this chapter, your student will learn about probability. Some of the skills your student will practice are:

- *identifying outcomes, events, and sample spaces*

- *finding the probability of simple events*

- *using Venn diagrams to illustrate events*

- *interpreting relative frequencies as probabilities and using them to make predictions*

- *comparing experimental and theoretical probability models*

- *predicting outcomes or events in a probability model*

Activity

Understanding probability models is useful in mathematics classes and in everyday life. You can help your student explore probability models by playing and analyzing this game.

- Write the numbers 1, 5, and 10 on three pieces of paper and place them face down on a table. Shuffle the papers.

- One player turns over two pieces of paper. If the sum of the two numbers shown is even, the player wins one point. Turn the numbers face down and shuffle the papers again.

- Discuss with your student what each outcome of the game is, what the sample space is, whether it is a uniform probability model, and whether it is a fair game. Then find the theoretical probability of each outcome.

- Play the game several times, recording your results. Find the experimental probability of each outcome. How do they compare with the theoretical probabilities?

Vocabulary to Practice

An **outcome** is the result of an activity such as spinning a spinner. A **sample space** is all the possible outcomes.

An **event** is a collection of related outcomes. Two events that cannot occur at the same time are called **mutually exclusive**.

If you flip 10 coins and the outcome is heads for 7 of them, the **experimental probability** of heads is $\frac{7}{10}$. The **theoretical probability** of heads is $\frac{1}{2}$.

A **simulation** is an experiment that models a real-world process.

In a **uniform probability model**, all the outcomes have equal probability.

Online Resources

For additional Parent Resources *my.hrw.com*