Math in Focus
Singapore Math
by Marshall Cavendish

Family Letters and Activities

## Chapter 1 Exponents

Dear Family,

In this chapter, your student will learn about expressions involving exponents. Some of the skills your student will practice

- *understanding exponential notation*

- *writing the prime factorization of a number*

- *using properties of exponents, such as the product of powers property and the quotient of powers property*

- *simplifying expressions with zero and negative exponents*

- *solving real-world problems involving exponents*

Activity

Simplifying expressions containing zero and negative exponents is a skill that students will use in many math and science classes. You can help your student practice this skill with the following activity.

- Write the integers –3, –2, –1, 0, 1, 2, and 3 on a set of small index cards or pieces of paper. Write the integers from 1 to 10 on a set of larger cards or pieces of paper.

- Shuffle each set of cards separately. With your student, select one large card and one small card at random. Use the number on the large card as the base, and the number on the smaller card as the exponent:
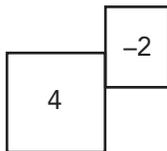
- Repeat the process with several more pairs of cards.

Vocabulary to Practice

The number 125 can be written in **exponential notation** as 5^3. This expression can be read "5 to the **power** of 3." The base is 5 and the **exponent** is 3.

To find the **prime factorization** of a number, write the number as a product of its prime factors.

Any nonzero number raised to the **power zero** is 1. (If $a \neq 0$, then $a^0 = 1$.)

A nonzero number with a **negative exponent** is the reciprocal of the power with the positive exponent. (If $a \neq 0$, then $a^{-2} = \frac{1}{a^2}$.)

Online Resources

For additional Parent Resources *my.hrw.com*