## *The Common Denominator*
## *A Family Math Newsletter*
## *Mathematics 6 GT Unit 3:  Representing Numbers*

### Unit at a Glance:
### Suggested Length of Unit: 15 days (45 minutes), 7.5 days (90 minutes)
- Decimals for Numbers between Integers
- Equal Fractions
- Adding and Subtracting Fractions
- Estimating by Rounding
- Fraction-Decimal Equivalence
- Fractions, Decimals, and Percents
- Using Percents
- Square Roots
- Probability

### Resources
- Textbook Resource: Viktora, Steven S, et al. Transition Mathematics. Wright Group/McGraw-Hill, 2008, pp. 130-201.
- Homework Help/Online book (teacher-provided code needed): Online Textbook Portal

### Exploring Chapter 3
The title of this chapter, "Representing Numbers," might more accurately be longer: "Representing Numbers that Are Not Integers." The three most common forms of number representation are decimals, fractions, and percents.

Lesson 3-1 introduces decimals and the decimal places to the right of the decimal points. The concept of the *density of rational numbers* in the real numbers, namely that between any two real numbers there exists a rational number is the new learning.

Lesson 3-2 discusses equal fractions, which are needed for the usual algorithms for adding and subtracting fractions in Lesson 3-3. The Equal Fractions Property is based on the Multiplicative Identity Property of One.

Lessons 3-4 through 3-7 form the heart of this chapter, giving students the concepts and skills they will use to switch among fractions, decimals, and percents as needed. Lesson 3-4 discusses rounding, with attention to integers and decimals. Lesson 3-5 brings fractions and decimals into play. Percents enter in Lesson 3-6 and are related to both fractions and decimals. In Lesson 3-7, percents are dealt with alone as instances of the Size Change Model for Multiplication.

Lesson 3-8 and 3-9 are two applications of the earlier lessons. In Lesson 3-8, square roots are revisited, this time with numbers whose square roots require estimation by decimals. In Lesson 3-9, probability is discussed, with particular attention to the idea that a probability may be written as a fraction, a decimal, or a percent.

Although students may not be as proficient as they should be in moving from one form to another, there will be plenty of opportunity to use and practice these ideas in later lessons and chapters.

### Quote
"The only way to learn mathematics is to do mathematics." Paul Halmos