

## **Dear Family,**

The next unit in your child's mathematics class is ***Bits and Pieces III: Computing with Decimals and Percents***. It is the third and final unit in the development of understanding fractions, decimals, and percents.

### **UNIT GOALS**

Like the work done to develop fraction operations, students will engage in many problem situations as they develop algorithms for adding, subtracting, multiplying, and dividing decimals. They will explore percents in the context of tip, tax, discount, and total cost.

Students have two ways of making sense of what decimals mean—extending the place-value system on which our number system is built or interpreting decimals as fractions. In order to have the most complete understanding of and skill with computation, students need to understand each of these meanings. Then they use them to examine why decimal algorithms for addition, subtraction, multiplication, and division make sense. Depending on the operation, the fraction interpretation or the place value interpretation may help in finding short-cut algorithms. Students will draw upon and use the ideas developed in *Bits and Pieces I* and *Bits and Pieces II*. For example, students will use the algorithm they developed for multiplying fractions in *Bits and Pieces II* to help them develop and understand an algorithm for multiplying decimals.

### **HELPING WITH HOMEWORK**

You can help with homework and encourage sound mathematical habits as your child studies this unit by asking questions such as:

- What is a reasonable estimate for the answer? Or, About how large will the sum (difference, product, or quotient) be?
- How do these decimals compare to fractions?
- What strategies or algorithms would help you solve this problem?
- Why are percents useful in this problem?

In your child's notebook, you can find worked-out examples from problems done in class, notes on the mathematics of the unit, and descriptions of the vocabulary words.

### **HAVING CONVERSATIONS ABOUT THE MATHEMATICS IN *BITS AND PIECES III***

You can help your child with his or her work for this unit in several ways:

- Ask your child for an explanation of the ideas in a problem. For example, why do you line up the decimals when adding and subtracting decimal numbers?
- At times, students may be working with ideas and algorithms that are different from the ones you learned. Encourage your child to share these methods with you as a way to help them make sense of what they are studying.
- When shopping or eating in a restaurant with your child, ask him or her to estimate what the tax will be on a purchase or what the tip should be for a meal.

A few important mathematical ideas that your child will learn in *Bits and Pieces III* are given on the back. As always, if you have any questions or concerns about this unit or your child's progress in class, please feel free to call.

Sincerely,