

Dear Family,

The next unit in your child's mathematics class this year is ***Growing, Growing, Growing: Exponential Relationships***. This unit focuses on exponential relationships, in which a quantity grows larger or smaller at an increasing rate rather than at a constant rate.

UNIT GOALS

Your child has previously studied linear growth, in which a fixed amount is repeatedly added to a beginning quantity to produce a sequence of values. Exponential growth involves patterns that are based on multiplication rather than addition. For example, in the sequence 3, 9, 27, 81, 243, ..., each term is 3 times the previous term.

The basic goal in *Growing, Growing, Growing* is for students to learn to recognize situations, data patterns, and graphs that are modeled by exponential expressions, and to use tables, graphs, and equations to answer questions about exponential patterns.

HELPING WITH HOMEWORK

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

- Is the relationship between variables an example of exponential growth or decay? Why?
- How can this relationship be detected in a table, graph, or equation? What is the growth factor?
- What table, graph, or equation would model the data or the pattern in a graph relating the variables?
- How could I answer questions about an exponential situation by studying a table, a graph, or an equation of the exponential relationship?
- How does this exponential relationship compare to other relationships between variables I have studied?

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 ***GROWING, GROWING, GROWING***

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

- Talk with your child about the applications that are presented in the unit and similar applications that you encounter in your daily activities.
- Have your child pick a question that was interesting to him or her and explain it to you.
- Look over your child's homework and make sure that all questions are answered and that explanations are clear.

A few important mathematical ideas that your child will learn in *Growing, Growing, Growing* 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,