Algebra 1 Newsletter
Unit 2: Introduction to Functions
October 2006

Dear Parents:

This is a brief description of what your child will learn in the second unit of Algebra 1 as well as some specific ways that you can help your child. Please feel free to contact your child's teacher if you have any questions.

Enduring Understanding

Functions and their representations are used to model and analyze real-world applications and quantitative relationships.

Essential Questions

How are functions and relations useful?

How are patterns of change represented in functions?

Indicators: Students will be able to . . .

recognize, describe, and/or extend patterns and functional relationships that are expressed numerically, algebraically and/or geometrically.

determine whether a relation that is expressed numerically or graphically is a function

represent patterns and/or functional relationships in a table, as a graph, and/or by mathematical expression.

WAYS PARENTS CAN HELP

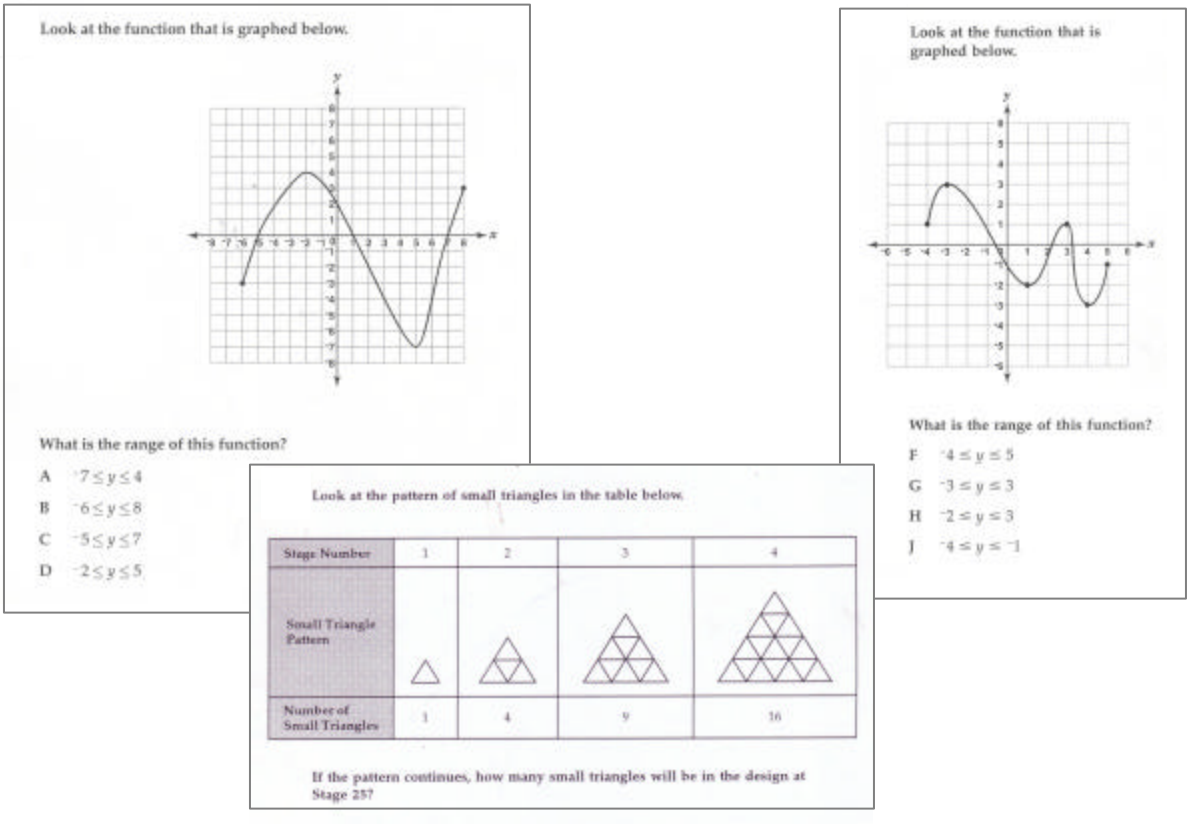
? Talk with your child about how they define a function. A function is a relation where each element of the domain (the *x* values) has one and only one element in the domain (the *y* values). Ask your child about the vertical line test.

? Ask your child about the characteristics of functions. Ask them about domain and range, increasing and decreasing, maximum and minimum, and intercepts.

? Discuss with your child how an equation of a line can help you graph a line.

Sample High School Assessment Problems

(from the Maryland state H.S.A. web site http://mdk12.org/mspp/high_school/look_like/algebra/intro.html)



Look at the function that is graphed below.

What is the range of this function?

A $-7 \le y \le 4$

B $-6 \le y \le 8$

C $-5 \le y \le 7$

D $-2 \le y \le 5$

Look at the function that is graphed below.

What is the range of this function?

F $-4 \le y \le 5$

G $-3 \le y \le 3$

H $-2 \le y \le 3$

J $-4 \le y \le -1$

Look at the pattern of small triangles in the table below.

Stage Number	1	2	3	4
Small Triangle Pattern				
Number of Small Triangles	1	4	9	16

If the pattern continues, how many small triangles will be in the design at Stage 25?