



Algebra 1 Newsletter

Unit 1: Equations and Inequalities in a Single Variable

September 2006



Dear Parents:

This is a brief description of what your child will learn in the first 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 real-world relationships.

Essential Questions

Why are equations and inequalities useful?

Why are functions and relations represented in multiple ways?

Indicators: Students will be able to . . .

solve linear inequalities and describe the solutions using numbers, symbols, and /or graphs.

graph an inequality, write and/or solve an inequality, or interpret an inequality in the context of a problem.

interpret and solve absolute value equations and inequalities.

WAYS PARENTS CAN HELP

? Talk with your child about ways that mathematics occurs in the real world. Talk about how real world situations can be modeled using mathematics, such as calculating how far you can go on one tank of gas, the cost of pizza with an unknown number of toppings, comparing the cost of a rental car from different companies, etc.

? Talk with your child about how to write expressions and equations from real world problems.

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)

Dominic rents a car for a trip. He pays \$300 plus \$0.20 per mile. Dominic has \$750 to spend on the car rental. What is the maximum number of miles Dominic can drive?

The depth of a lake is 26 meters. Melting snow causes the lake to rise 0.05 meters each day. At the end of 8 days, what will be the depth, in meters, of the lake?

Manuel has budgeted \$80 a day to rent a truck. The rental company charges \$35 a day plus \$0.25 per mile. Which of these inequalities represents the number of miles (m) Manuel can drive in one day and stay within his budget?

F $m \leq 180$

G $m \geq 180$

H $m \leq 460$

J $m \geq 460$

Bruce bought 4 candy bars and 3 decks of cards. The candy bars cost \$1.35 each. Bruce spent no more than \$12.00. Which of these inequalities best represents the cost (c) for one deck of cards?

F $c \leq \$2.20$

G $c > \$2.20$

H $c \leq \$3.55$

J $c > \$3.55$