

Welcome to Algebra 1 Newsletters

The BCPS Office of Mathematics is happy to share Algebra I Newsletters with our students and their families. The Newsletters are provided to help give parents and guardians insight into each Unit of the course. There are 4 sections in each Newsletter: Unit at a Glance, Resources, Exploring Mathematics, and a Quote. In this first edition, there is an explanation of each of the Newsletter sections included below the section name. There are five Units in the Algebra I course:

1. Linear Functions and Models
2. Exploring Linear Relationships
3. Exponential Functions
4. Quadratic and Other Functions
5. Data Analysis

Unit at a Glance

The “Unit at a Glance” section is provided to give an overview of the specific topics and skills that students will be expected to learn in the unit. An estimated time frame is also stated.

Topic	Skills	Length

Exploring Mathematics

In the “Exploring Mathematics” section, connections are made between the math in the unit and practical applications. This can be an exploration of related careers, applications of the math to real-world problems, discussion prompts to have with your child, or information about growth mindsets. One of the best ways to support your child in math class is to have positive conversations about math. The prompts in this section are meant to help start some positive discussions surrounding the math in the unit.

Resource Toolkit

HMH Resources

The “Resources” section has information about texts, videos, and practice problems that can benefit a student when working outside of the classroom. The first part of the “Resources” section lists three different locations where information and supports can be found: the physical *HMH Algebra I Textbook*, as well as the *Interactive Student Edition* and *Student Resources*, which are accessed through BCPSone Digital Content.

Homework Help Section

The *Homework Help* section references an item or two that are in the *Student Resources* portion of HMH that are the most beneficial for students in need of support outside of the classroom. Encourage your student to access these resources if they are having difficulty or confusion about a topic. If your student continues to have difficulty, encourage them to discuss with their teacher.

The Common Denominator

A Family Math Newsletter

Algebra 1 Unit 1: Linear Functions and Models

Unit at a Glance

In this unit, the students study mathematical relationships and determine if a given relationship is a functional relationship. The students look at relations and functions numerically, graphically, algebraically, and verbally. The students begin to understand the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane. The students will then focus on linear relationships, developing an understanding of slope as rate of change, and working with both standard form and point-slope form. Graphic connections are used to build understanding of solving inequalities, including compound inequalities. The graphing calculator is a strategic tool to facilitate graphing and solving linear equations in one variable. The following topics will be studied:

Topic	Skills	Length
Topic A: Linear Relationships	<ul style="list-style-type: none">Quantitative ReasoningAlgebraic ModelsFunction Families and ModelsPatterns and SequencesLinear FunctionsForms of Linear EquationsLinear Equations and Inequalities	40 (45-minute) periods 20 (90-minute) periods

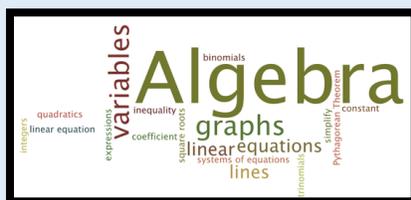
Exploring Mathematics

Real World Connections

When you take your child to fill your gas tank, have them predict when the gas tank will be empty given the miles per gallon your car gets. Also, have them determine your car's number of miles per gallon. If your car can travel 300 miles and your car holds 15 gallons of gas, how many miles per gallon does your car get?

When you attend a family gathering and you need to bring a certain number of drinks and snacks, have your child determine the different combinations of food you could buy with a certain amount of money.

Discuss this situation with your child: You need to borrow money from your siblings to buy a new phone. Your sister says you will owe her \$10 the first week, and \$5 each week after that. Your brother says you would owe him \$1 the first week, but he will double the amount you owe him each week after that. Which sibling gives you the better deal?

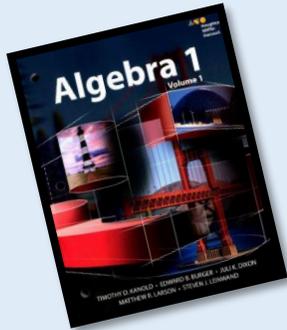


Resource Toolkit

HMH Resources

HMH Algebra 1 Textbook, Interactive Student Edition, or Student Resources

- Topic A
 - ◊Unit 1: Quantities and Modeling, Module 1: Quantitative Reasoning, Lessons 1.1-1.3
 - ◊Unit 1: Quantities and Modeling, Module 2: Algebraic Models, Lessons 2.1-2.5



Homework Help Section

- Topic A
 - ◊Go to HMH Student Resources, Unit 1, Module 1:
 - ◆Lesson 1.1: Solving Equations, Reteach
 - ◆Lesson 1.2: Modeling Quantities, Math on the Spot Video
 - ◊Go to HMH Student Resources, Unit 1, Module 2:
 - ◆Lesson 2.1: Modeling with Expressions, Student Edition, Lesson 2.1
 - ◆Lesson 2.2: Creating and Solving Equations, Reteach
 - ◆Lesson 2.3: Solving for a Variable, Math on the Spot Video
 - ◆Lesson 2.4: Creating and Solving Inequalities



“I’ve always believed that if you put in the work, the results will come.”
– Michael Jordan