



**SOUTHERN LEHIGH SCHOOL DISTRICT**  
5775 Main Street  
Center Valley, PA 18034

## **Planned Course for Mathematics**

**Course:** Algebra I

### **Standards:**

This course is aligned to standards within the following Domains of the PA Core Standards:

|      |                            |
|------|----------------------------|
| HS.F | Number and Quantity        |
| HS.D | Algebra                    |
| HS.C | Functions                  |
| HS.B | Statistics and Probability |

### **Course Description:**

The K-12 mathematics program within Southern Lehigh School District will provide opportunities for all students to develop the ability to independently apply mathematical knowledge and skills to real-world situations. A robust and coherent curriculum will prepare students to think and reason mathematically while requiring them to demonstrate a deep understanding of mathematics. Students will develop critical thinking, problem solving, innovation, collaboration, and communication skills. A focus will be placed on using mathematics as a key to understanding the world, in order to meet the challenges of a dynamic society.

ALGEBRA I focuses on developing students' skills and accuracy in algebraic techniques and their applications. This course is designed to develop understanding of the real number system. It includes a study of number properties, equations, inequalities, polynomials, and linear functions. Emphasis is placed on the development of conceptual understanding, logical reasoning, problem solving, and procedural fluency. Concepts are developed through authentic applications. **This is a Keystone course where students are required to take the Keystone Algebra I exam at the end of the course.** Throughout the course, students will be enrolled in a mandatory Spartan Period for Keystone Algebra I exam preparation.

### **Prerequisite(s):**

- Earn a minimum grade of a C in Grade 8 Mathematics

### **Measurable objectives to be attained by students:**

Specific objectives for this course are aligned to the Pennsylvania Core Standards for Mathematics and the Common Core State Standards for Mathematics as outlined in the Scope and Sequence for Algebra I.

**Instructional Strategies:**

Below is a list of suggested strategies for high-quality instruction in mathematics:

- Instructional components outlined in the *Framework for Teaching* by Charlotte Danielson
- Use Concrete Representational Abstract (CRA) representations
- Promote productive struggle
- Promote mathematical discourse
- Use precise mathematical language

**Estimated Instructional Time:**

77 minutes per day on an alternating A/B block schedule for one school year

**Forms of Assessment to Measure Attainment of Course Objectives:**

- Curriculum-based measures
- Benchmark Assessments
- Formative Assessments
- Summative Assessments

**Resources:****Student Text Resources:**

Larson, Ron, and Laurie Boswell. *Big Ideas Math: A Common Core Curriculum Algebra I*. Big Ideas Learning, LLC, 2019.

- Student Text Printed Version
- Student Text Online Version
- Student Journal

**Teacher Resources:**

Larson, Ron, and Laurie Boswell. *Big Ideas Math: A Common Core Curriculum Algebra I*. Big Ideas Learning, LLC, 2019.

- Teacher's Guide Printed Version with Online Access
- Assessment Book
- Resources by Chapter

**Technology:**

- District approved supplemental technology

**Other Resources:**

- Manipulatives
- Teacher created resources
- District approved supplemental resources