



Southmoreland School District Algebra 1B Curriculum Overview

Algebra 1B Overview:

This course is a continuation of the Algebra I A class. Topics of this Algebra course will focus heavily on graphing and applying linear equations and inequalities, systems of linear equations and inequalities, explore and simplify quadratic and exponential expressions and graphs, probability and data analysis, and review all topics to prepare for the Algebra I Keystone exam. The Algebra 1 Keystone exam will be taken at the end of this course.

Module Titles:

- Module 1: Linear Functions**
- Module 2: Linear Inequalities**
- Module 3: Systems of Linear Functions and Inequalities**
- Module 4: Operations with Polynomials**
- Module 5: Statistics**
- Module 6: Review**

Module Overviews:

Module 1: Linear Functions

The students will be able to graph linear equations, solve linear equations by graphing and calculate the rate of change. They will relate direct variation to the rate of change and use arithmetic sequences with linear functions. The students also will be able to graph equations in slope intercept form, as well as, write equations in slope intercept form and point-slope form. They identify and graph parallel and perpendicular lines. The module ends with using the line of best fit with scatter plots.

Module 2: Linear Inequalities

The students will be able to solve inequalities using addition, subtraction, multiplication, and division. The inequalities will be multi-step and compound, as well as, absolute value.

Module 3: Systems of Linear Functions and Inequalities

The students will be able to graph systems of equations and inequalities. They will also use substitution and elimination to find solutions.



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Module 4: Operations with Polynomials

The students will be able to add, subtract, multiply and divide polynomials. The students will also be able to factor polynomials when a is equal to 1.

Module 5: Statistics

The students will calculate measures of central tendency and represent data using various graphs, such as, box and whisker, stem and leaf, and line graphs.

Module 6: Review

The students will review all the topics covered on the Keystone Algebra 1 Test to prepare for State testing. This will cover test taking strategies and open ended questions.