

## Curriculum Map: Math Analysis

Course: MATH ANALYSIS I Sub-topic: General

Grade(s): 11 to 12

**Course Description:** This course is designed to focus on the keystone assessment anchors, thus building a more focused foundation in Algebra I to improve to a proficient level on the Algebra I Keystone Exam.&nbsp;   Students will have the opportunity to develop a deeper conceptual and practical understanding of numbers and operations, algebraic concepts (such as linear equations, inequalities, and functions), geometry, measurements, and data organizations (including probability).&nbsp;   Through the use of higher order thinking skills and problem solving, students will implement a wide variety of mathematics to real world applications.&nbsp;   CDT and&nbsp;  other&nbsp;  assessments will be used to determine necessary targeted instruction.&nbsp;   Students who do not meet proficiency on the Algebra I Keystone Exam will automatically be placed in Math Analysis (after successfully completing Geometry).

### Unit: Unit 0 - Introduction/Syllabus, Equations

#### Topic: 0.1 Welcome and Syllabus

Minutes for Topic: 60

#### Topic: 0.2 Equations

Minutes for Topic: 102

### Unit: Unit 1 - Probability

#### Topic: 1.1 Simple Probability and Odds

Minutes for Topic: 258

#### Topic: 1.2 Compound Probability - Independent Events

Minutes for Topic: 86

#### Topic: 1.3 Compound Probability - Dependent Events

Minutes for Topic: 172

#### Topic: 1.4 Review Unit 1 and Test

Minutes for Topic: 172

### Unit: Unit 2 - Statistics

#### Topic: 2.1 Statistics Part 1 - Central Tendency, Dispersion, Other

Minutes for Topic: 172

#### Topic: 2.2 Stem-and-Leaf AND Box-and-Whisker Plots

Minutes for Topic: 172

#### Topic: 2.3 Interpret Plots

Minutes for Topic: 172

#### Topic: 2.4 Scatterplots and other graphs

Minutes for Topic: 172

#### Topic: 2.5 Unit 2 Review and Test

Minutes for Topic: 172

### Unit: Unit 3 - Inequalities, Absolute Value Equations, Compound Inequalities, Absolute Value Inequalities

#### Topic: 3.1 Solving Inequalities in one variable

Minutes for Topic: 172

#### Topic: 3.2 Absolute Value Expressions

Minutes for Topic: 86

#### Topic: 3.3 Absolute Value Equations

Minutes for Topic: 172

#### Topic: 3.4 Compound Inequalities

Minutes for Topic: 258

#### Topic: 3.5 Writing Compound Inequalities or Absolute Value Equations from a graph

Minutes for Topic: 86

**Topic: 3.6 Review and Test**

Minutes for Topic: 172

**Topic: 3.7 Absolute Value Inequalities**

Minutes for Topic: 258

**Topic: 3.8 Writing Absolute Value Inequalities from a graph**

Minutes for Topic: 86

**Topic: 3.9 Writing Absolute Value Inequalities from Applications**

Minutes for Topic: 86

**Topic: 3.95 Review Unit and Quest**

Minutes for Topic: 172

**Unit: Unit 4 - Radicals**

**Topic: 4.1 Simplify Radicals - Square Roots**

Minutes for Topic: 172

**Topic: 4.2 Add, Subtract, Multiply Radicals - Square Roots**

Minutes for Topic: 172

**Topic: 4.3 Multiplication of Radicals with Distribution, Divide/Rationalize Radicals - Square Roots**

Minutes for Topic: 258

**Topic: 4.4 Simplify Radicals of Higher Index**

Minutes for Topic: 172

**Topic: 4.5 Review Unit and Test**

Minutes for Topic: 172

**Topic: 4.6 General Review of all topics; Keystone Exam Review from Released Items of 4 units**

Minutes for Topic: 172

**Unit: Unit 5 - Linear Equations in Two Variables and Systems of Equations**

**Topic: 5.1 Slope, Y-intercept, Slope-Intercept form of a line, Graphing**

Minutes for Topic: 258

**Topic: 5.2 Solving Systems of Equations - Graphically**

Minutes for Topic: 172

**Topic: 5.3 Solving Systems of Equations - Algebraically - Substitution**

Minutes for Topic: 172

**Topic: 5.4 Solving Systems of Equations - Algebraically - Elimination**

Minutes for Topic: 344

**Topic: 5.5 Applications of Systems of Equations**

Minutes for Topic: 258

**Topic: 5.6 Unit Review and Test**

Minutes for Topic: 172

**Topic: 5.7 Keystone Exam Review from Released Items - Systems of Equations**

Minutes for Topic: 86

**Unit: Unit 6 - Linear Inequalities in Two Variables and Systems of Inequalities**

**Topic: 6.1 Graphing Linear Inequalities**

Minutes for Topic: 172

**Topic: 6.2 Systems of Linear Inequalities - Graphing**

Minutes for Topic: 258

**Topic: 6.3 Writing Systems of Linear Inequalities from a graph**

Minutes for Topic: 86

**Topic: 6.4 Applications of Systems of Inequalities**

Minutes for Topic: 172

**Topic: 6.5 Review Unit and Test**

Minutes for Topic: 172

**Topic: 6.6 Keystone Exam Review from Released Items on Systems of Inequalities**

Minutes for Topic: 86

## **Unit: Unit 7 - Functions**

### **Topic: 7.1 Relations and Functions**

Minutes for Topic: 172

### **Topic: 7.2 More with Functions**

Minutes for Topic: 172

### **Topic: 7.3 Review and Quiz**

Minutes for Topic: 86

### **Topic: 7.4 Keystone Review with Functions**

Minutes for Topic: 86

## **Unit: Unit 8 - Factoring**

### **Topic: 8.1 GCF/GCD**

Minutes for Topic: 172

### **Topic: 8.2 Factor Trinomials - $a=1$**

Minutes for Topic: 172

### **Topic: 8.3 Factor Trinomials with GCF/GCD - $a \neq 1$**

Minutes for Topic: 172

### **Topic: 8.4 Review and Quiz**

Minutes for Topic: 172

## **Unit: Unit 9 - Keystone Exam Review**

### **Topic: 9.1 Practice Release Items from Keystone Exams**

Minutes for Topic: 344

## **Unit: Unit 10 Course Review and Final Exam**

### **Topic: 10.1 Review Course**

Minutes for Topic: 172

### **Topic: 10.2 Final Exam**

Minutes for Topic: 172

## **Unit: Unit 11 - PA Algebra I Keystone Exam**

### **Topic: 11.1 Module 1**

Minutes for Topic: 86

### **Topic: 11.2 Module 2**

Minutes for Topic: 86