INTRO TO COLLEGE MATH SYLLABUS

2017-2018 Academic School-Year

1st Marking Period

Unit 1. Whole Numbers
Introduction
Addition
Subtraction
Multiplication
Division
Exponential Notation and Order of Operations
Rounding whole numbers

Unit 2 & 3 Fractions
NJSL-5.NF.A.1, NJSL-5.NF.B.4, NJSL-5.NF.B.7
Multiplication of Fractions and Mixed Numbers
Division of Fractions and Mixed Numbers
Least Common Multiple and Greatest Common Factor
Writing Equivalent Fractions
Addition of Fractions and Mixed Numbers
Subtraction of Fractions and Mixed Numbers
Order, Exponents and the Order of Operations Agreement

Unit 4 Decimals
NJSL-4.NF.C.6, NJSL-5.NBT.A.3.b, NJSL-5.A.4, NJSL-5.NBT.B.7
Addition
Subtraction
Multiplication
Division
Rounding Decimals
Comparing and Converting Fractions and Decimals

2nd Marking Period

Unit 5 Ratio and Proportion
Ratio
Rate
Proportion

Unit 6 Percent
Percent Equations
Percent Applications

Unit 7 Measurement
NJSL-4.MD.A.1, NJSL-4.MD.A.2, NJSL-4.MD.A.3, NJSL-5.MD.A.1
English measurement
Metric measurement
English - metric conversions

Unit 8 Data Analysis and Statistics
NJSL-6.SP.A.1, NJSL-6.SP.B.4, NJSL-6.SP.B.4, NJSL-7.SP.A.1
Mean and Median, Mode
Pictographs, Circle graphs, bar graphs, and line graphs
Histograms and Frequency Distribution
Unit 9

Real Number System
Real numbers and ordering
Adding real numbers
Subtracting real numbers
Multiplying real numbers
Dividing real numbers and order of operations

3rd Marking Period

Unit 10

The Language of Algebra
Exponents and Order of Operations
Positive and Negative Integers
Translation
Properties of Signed Numbers
Add, Subtract, Multiply and Divide Signed Numbers
Evaluate Expressions
Add, Subtract, Multiply and Divide Terms

Unit 11

Equations and Inequalities
Solving Linear Equations
Solving Literal Equations
Solving Linear Inequalities
Applications

Unit 12

Polynomials
Extending the Properties of Exponents
Introduction to Polynomials
Adding and Subtracting Polynomials
Multiplying Polynomials
Special Products
Dividing Polynomials (excluding long division)

Unit 13

Factoring
Factoring - An Introduction
Factoring out a GCF
Factor by grouping
Difference of Squares
Trinomials
Solving Equations by Factoring

4th Marking Period

Unit 14

Algebraic Fractions
Writing Algebraic Fractions in Simplest Form
Adding and Subtracting Like Fractions
Adding and Subtracting Unlike Fractions
Multiplying and Dividing Algebraic Fractions
Equations Involving Fractions

Unit 15

Graphing Linear Equations
Solutions of Equations in Two Variables
The Rectangular Coordinate System
Graphing Linear Equations
Unit 16  Introduction to Functions  

Evaluate an Expression  
Evaluate a Function  
Express the Equation of a Line as a Linear Function

Unit 17  Systems of Linear Equations  

Solving by Graphing  
Solving by Adding  
Solving by Substitution  
Applications

Unit 18  Exponents and Radicals  
**NJSLS-N.RN.A.1**, **NJSLS-N.RN.A.2**, **NJSLS-N.RN.B.3**

Roots and Radicals (limited to an index 2)  
Simplifying Radical Expressions  
Adding and Subtracting Radicals  
Multiplying Radicals

**Course Expectations and Skills**

- Students are required to have proficiency in all prerequisite topics for Algebra 1. Those who do not demonstrate proficiency will be required to seek additional help after school to close their achievement gap in order to be successful in this course.
- Students are required to take notes in Cornell Notes format and maintain those notes in a neat and organized notebook.
- Students are required to participate in both small and large group discussions and activities, as directed.
- Students are required to complete a project each marking period, including those which require the use of technology.

**Resources**

Text Book:  
*Basic Skills Math*, August Treff and Donald Jacobs  
*Algebra 1*, Holt McDougal

Supplemental Materials:  
Algebra 1 Practice Workbook  
Kuta Software  
Boardworks Interactive PowerPoint Software

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<th>Grading Scale</th>
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