

# INTRO TO COLLEGE MATH SYLLABUS

2017-2018 Academic School-Year

## *1<sup>st</sup> Marking Period*

### Unit 1.

#### **Whole Numbers**

**NJSLS-4.NBT.A.2, NJSLS-4.NBT.A.3, NJSLS-4.NBT.B.4, NJSLS-4.NBT.B.5, NJSLS-4.NBT.B.6, NJSLS-4.OA.A.2, NJSLS-5.NBT.A.2**

Introduction  
Addition  
Subtraction  
Multiplication  
Division  
Exponential Notation and Order of Operations  
Rounding whole numbers

### Unit 2 & 3

#### **Fractions**

**NJSLS-3.NF.A.3.b, NJSLS-3.NF.A.3.d, NJSLS-4.NF.A.1, NJSLS-4.NF.A.2, NJSLS-4.NF.B.3.a, NJSLS-4.NF.B.3.c, NJSLS-4.MD.A.2, NJSLS-5.NF.A.1, NJSLS-5.NF.B.4, NJSLS-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**

**NJSLS-4.NF.C.6, NJSLS-5.NBT.A.3.b, NJSLS-5.A.4, NJSLS-5.NBT.B.7**

Addition  
Subtraction  
Multiplication  
Division  
Rounding Decimals  
Comparing and Converting Fractions and Decimals

## *2<sup>nd</sup> Marking Period*

### Unit 5

#### **Ratio and Proportion**

**NJSLS-6.RP.A.1, NJSLS-6.RP.A.2, NJSLS-6.RP.A.3, NJSLS-6.RP.A.3.b, NJSLS-6.RP.A.3.d, NJSLS-7.RP.A.1, NJSLS-7.RP.A.3**

Ratio  
Rate  
Proportion

### Unit 6

#### **Percent**

**NJSLS-4.NF.C.5, NJSLS-6.RP.A.1, NJSLS-6.RP.A.2, NJSLS-7.RP.A, NJSLS-7.RP.A.2, NJSLS-7.RP.A.3**

Percent Equations  
Percent Applications

### Unit 7

#### **Measurement**

**NJSLS-4.MD.A.1, NJSLS-4.MD.A.2, NJSLS-4.MD.A.3, NJSLS-5.MD.A.1**

English measurement  
Metric measurement  
English - metric conversions

### Unit 8

#### **Data Analysis and Statistics**

**NJSLS-6.SP.A.1, NJSLS-6.SP.B.4, NJSLS-6.SP.B.4, NJSLS-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**

[NJSLS-7.NS.A.1, NJSLS-7.NS.A.2, NJSLS-7.EE.A.1, NJSLS-8.NS.A.1, NJSLS-8.NS.A.2]

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

**3<sup>rd</sup> Marking Period**

Unit 10

**The Language of Algebra**

[NJSLS-6.EE.A.2, NJSLS-7.NS.A.1, NJSLS-7.NS.A.2, NJSLS-7.NJ.A.3, NJSLS-A.SSE.A.1, NJSLS-A.SSE.A.2, NJSLS-A.SSE.B.3]

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**

[NJSLS-A.CED.A.1, NJSLS-A.CED.A.3, NJSLS-A.CED.A.4, NJSLS-A.REI.A.1, NJSLS-A.REI.B.3, NJSLS-A.REI.D.11]

Solving Linear Equations  
Solving Literal Equations  
Solving Linear Inequalities  
Applications

Unit 12

**Polynomials**

[NJSLS-A.CED.A.1, NJSLS-A.CED.A.3, NJSLS-A.CED.A.4, NJSLS-A.REI.A.1, NJSLS-A.REI.B.3, NJSLS-A.REI.D.11]

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

Unit 13

**Factoring**

[NJSLS-A.SSE.B.3, NJSLS-A.CED.A.1, NJSLS-A.REI.B.4.b]

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

**4<sup>th</sup> Marking Period**

Unit 14

**Algebraic Fractions**

[NJSLS-6.RP.A.1, NJSLS-7.NS.A.1, NJSLS-7.NS.A.2, NJSLS-A.REI.A.2]

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**

[NJSLS-6.EE.C, NJSLS-8.EE.B.5, NJSLS-A.REI.B.3, NJSLS-A.REI.D.10]

Solutions of Equations in Two Variables  
The Rectangular Coordinate System  
Graphing Linear Equations

Unit 16

**Introduction to Functions**

[NJSLS-8.EE.A.1, NJSLS-8.EE.C.7, NJSLS-F.IF.A.1, NJSLS-F.IF.A.2, NJSLS-F.IF.C.8, NJSLS-F.BF.A.1]

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

Unit 17

**Systems of Linear Equations**

[NJSLS-8.EE.C.8, NJSLS-8.EE.C.8.a, NJSLS-8.EE.C.8.b, NJSLS-A.REI.C.5, NJSLS-A.REI.C.6, NJSLS-A.REI.C.7]

- 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

Grading Scale	1 <sup>st</sup> – 4 <sup>th</sup> MP
Summative Assessment	50%
Formative Assessment	30%
Class Participation	20%