Decatur Public Schools
Educating for Success

Algebra I
2017-2018

Course Description:

Topics to be covered first semester include linear variables and expressions, absolute value and operations with signed numbers, graphs of linear equations, slope-intercept, point-slope form of linear equations, linear inequalities, systems of linear equations. Topics to be covered second semester include statistics and data, polynomials, quadratic equations and functions, exponential functions, radical functions, and an introduction to trigonometry.

Course Units:

Semester 1
Unit 3: Foundational Skills: Expressions—2 weeks
Unit 4: Linear Functions: One Variable, Equalities—4 weeks
Unit 5: Linear Functions: One Variable, Inequalities—3 weeks
Unit 6: Linear Functions: Two Variables, Identifying Functions and Relations—4 weeks
Unit 7: Linear Functions: Two Variables, Writing and Graphing Linear Functions—4 weeks

Semester 2
Unit 8: Linear Functions: Two Variables, Writing and Solving Systems—4 weeks
Unit 9: Statistics—3 weeks
Unit 10: Other Functions: Polynomials—7 weeks
Unit 11: Other Functions: Exponential—3 weeks
Unit 12: Other Functions: Radical Functions, Simplifying—1 week

Required Materials:
Text—
MacBook
Pencil
Notebook(s)
Folder

Grading Policy:

Category Weights: Your total grade is NOT based on total points. The following categories will be applied to the grade book to determine your final grade:

25% - Classwork
15% - Homework
60% - Tests/Quizzes

Grading Scale
100-90%   A
89-80%   B
79-70%   C
69-60%   D
59% >   F

Learning Standards:

The Real Number System	**N.RN.1-2**—Extend the properties of exponents to rational exponents. **N.RN.3**—Use properties of rational and irrational numbers.
Quantities	**N.Q.1-3**—Reason quantitatively and use units to solve problems.
Seeing Structure in Expressions	**A.SSE.1-2**—Interpret the structure of expressions. **A.SSE.3-4**—Write expressions in equivalent forms to solve problems.
Arithmetic with Polynomials and Rational Expressions	**A.APR.1**—Perform arithmetic operations on polynomials. **A.APR.2-3**—Understand the relationship between zeros and factor of polynomials. **A.APR.4-5**—Use polynomial identities to solve problems. **A.APR.6-7**—Rewrite rational expressions.
Creating Equations	**A.CED.1-4**—Create equations that describe numbers or relationships.
Reasoning with Equations and Inequalities	**A.REI.1-2**—Understand solving equations as a process of reasoning and explain the reasoning. **A.REI.3-4**—Solve equations and inequalities in one variable. **A.REI.5-9**—Solve systems of equations. **A.REI.10-12**—Represent and solve equations and inequalities graphically.
Interpreting Functions	**F.IF.1-3**—Understand the concept of a function and use function notation. **F.IF.4-6**—Interpret functions that arise in application in terms of the context **F.IF.7-9**—Analyze functions using different representations.
Building Functions	**F.BF.1-2**—Build a function that models a relationship between two quantities. **F.BF.3-4**—Build new functions from existing functions.
Linear, Quadratic, & Exponential Models	**F.LE.1-3**—Construct and compare linear, quadratic, and exponential models and solve problems. **F.LE.5**—Interpret expressions for functions in terms of the situation they model.
Interpreting Categorical and Quantitative Data	**S.ID.1-4**—Summarize, represent, and interpret data on a single count or measurement variable. **S.ID.5-6**—Summarize, represent and interpret data on two categorical and quantitative variables. **S.ID.7-9**—Interpret linear models

For a complete list of the mathematical common core standards, please visit:
http://www.corestandards.org/math

For a complete list of the eight mathematical practices, please visit:
http://www.corestandards.org/math/practice

Behavior Expectations:

Please refer to DPS61 Handbook and Code of Conduct.

Original Work, Cheating, Plagiarism, and Paraphrasing Policy :

Please refer to DPS61 Handbook and Code of Conduct.

I have read and understand the attached syllabus and course guidelines for (insert course name and school name here).

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Student Name (print)   Signature

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Parent/Guardian Signature