

SCHOOL: Atlantic Middle School
ADDRESS: 86 Hollis Avenue
PHONE #: 617-984-8727

SYLLABUS

TEACHER Mrs. Deborah A. Madden

COURSE/GRADE LEVEL Algebra I, Honors, Grade 8

INSTRUCTIONAL MATERIALS

Algebra 1 MAJOR TOPICS*

Expressions, Equations, and Functions

Evaluate Expressions

Apply Order of Operations

Write Expressions, Equations, and Inequalities

Represent Functions as Rules, Tables, and Graphs

Properties of Real Numbers

Use Integers and Rational Numbers

Add, Subtract, Multiply, and Divide of Real Numbers

Apply the Distributive Property

Find Square Roots and Compare Real Numbers

Solving Linear Equations

Solving Equations Using One, Two, or More Steps

Write Ratios and Proportions

Solve Proportions Using Cross Products

Solve Percent Problems

Rewrite Equations and Formulas

Geometry

Perimeter, Circumference, Area

Volume, Surface Area

Graphing Linear Equations and Functions

Plot Points in a Coordinate Plane

Graph Linear Equations

Graph Using Intercepts

Find the Slope and Rate of Change

Graph Using Slope-Intercept Form

Model Direct Variation

Graph Linear Functions

Writing Linear Equations

Write and Use Linear Equations in Slope-Intercept Form

Write Linear Equations in Point-Slope Form and in Standard Form

Write Equations of Parallel and Perpendicular Lines

Fit a Line to Data

Predict with Linear Models

Solving and Graphing Linear Inequalities

Solve Inequalities Using Addition, Subtraction, Multiplication, and Division

Solve Multi-Step Inequalities and Compound Inequalities

Solve Absolute Value Equations and Inequalities

Graphing Linear Inequalities in Two Variables

Solving Systems of Linear Equations and Inequalities

Solve Linear Systems by Graphing, Substitution, Linear Combinations

Solve Systems of Linear Inequalities

Exponents and Exponential Functions

Apply Exponent Properties Involving Products and Quotients

Define and Use Negative and Zero Exponents

Use Scientific Notation

Write and Graph Exponential Growth Functions and Exponential Decay Functions

Polynomials and Factoring

Add, Subtract, and Multiply Polynomials

Factor Special Products of Polynomials

Solve Polynomial Equations in Factored Form

Factor Polynomials Completely

Quadratic Equations and Functions

Graph Quadratic Equations

Use Square Roots to Solve Quadratic Equations

Solve Quadratic Equations by Graphing, Completing the Square, and the Quadratic Formula

Interpret the Discriminant

Compare Linear, Exponential, and Quadratic Models

*ASSESSMENT TOOLS

Rubrics

***See Individual Student Education Plans or 504 Plans for modification where applicable.**

HOMEWORK EXPECTATIONS

Homework is given every night including Fridays and is due the following class day. It is worth one point. All math work must be done in pencil not in erasable ink. My homework is posted on the white board behind my desk and is on www.new.schoolnotes.com. The textbook is online and can be found at www.classzone.com. and the code is 3729310-40.

GRADING POLICY

Quizzes, mid-chapter test, test, project, and open ended questions have point values according to the number of examples each have. All quizzes and test can be re-take before school or at home, they will average with the original. These points and the homework points will be added and the percentage of the total will be student's final grade,

MAKEUP PROCEDURE

If a student is absent, the student should see me on the day of return to school to receive any make-up work. Arrangements will be made on an individual basis as to when missed tests can be taken.

GENERAL INFORMATION

Each student needs to have his or her text and a pencil each day. It is also strongly recommended that each student have a scientific calculator. If you are purchasing a new one, a TI-30XIIS (made by Texas Instrument) is the type used in class.

***Adjustments may be made in this syllabus to meet student needs.**