

Newton 8A Math Curriculum (Oak Hill)ⁱ

The accelerated algebra curriculum uses Impact Math: Algebra and More, Course Three and McDougal – Littel, Algebra: An Integrated Approach. The course is essentially an algebra one course with a study of quadratics. A major theme of the course is using algebra to solve real world problems. A short unit on ninth grade geometry, involving proof is the last unit of the year (if there is time).

Unit One: The Rules of Algebra and Signed Numbers:

Parts of chapters two and three from McDougal.

The rational of this unit is to either introduce or review combining like terms, solving equations, including introducing the zero product property, substitution, distribution, absolute value and distributing a negative or subtraction sign over a quantity.

Basic Outline:

- 2.1: Recognize equalities, inequalities and expressions. Introduce the concept of a term and combining like terms to simplify expressions.
 - 2.2 and 2.3: Recognize equivalent equations, use inverse operations to solve equations, apply the zero product property to solve appropriate equation.
 - 2.4: Use substitution to solve equations. Apply the distributive property.
 - 3.2: Find the absolute value of a real number. Use inequalities with real numbers.
 - 3.3 – 3.5: Perform operations with signed numbers and like terms.
 - 3.6: Multiply by -1 to find the opposite of a quantity.
- Discuss other properties, such as closure, commutative and associative properties.

Unit Two: Writing and Solving Equations

The goals of this unit are for students to solve one variable, multi-step equations, that contain variables on both sides, fractions, decimals, parentheses, absolute value and squared quantities. Students will also translate word problems into an appropriate one variable equation, solve the equation and answer the original question.

Basic Outline:

- 4.1 Problem Sets B and C Impact, 4.1 McDougal: Solve equations with variables on both sides.
- 4.2 McDougal: Equations that have no solution or are identities.
- 4.3 McDougal: The distributive property in equations.
- 4.1 Problem Set D Impact: Using equations with one variable to solve word problems (two days on this, supplement with worksheets, Math with Pizzazz).
- 4.5 McDougal: Equations with absolute value or squared quantities.
- 4.6 McDougal: Solve more complex equations with absolute value or squared quantities.