



# MATH NEWS



Algebra I, Module 1, Topic C

## Algebra I

*Module 1: Relationships Between Quantities and Reasoning with Equations and Their Graphs*

### Math Parent Letter

This document is created to give parents and students a better understanding of the math concepts found in Eureka Math (© 2013 Common Core, Inc.) that is also posted as the Engage New York material which is taught in the classroom. Module 1 of Eureka Math (Engage New York) focuses on linear, quadratic, and exponential functions. These are the functions students will focus on throughout their Algebra I course. The goal is to introduce students to these functions by having them make graphs of a situation (usually based upon time) in which these functions naturally arise. As they graph, they will reason quantitatively and use units to solve problems related to the graphs they create.



### Focus Area Topic C:

*Solving Equations and Inequalities*

#### Words to Know

**Number Sentence:** A number sentence is a statement of equality between two numerical expressions. A number sentence is said to be true if both numerical expressions are equivalent (that is, both evaluate to the same number). It is said to be false otherwise. True and false are called truth values.

**Algebraic equation:** An algebraic equation is a statement of equality between two expressions. Algebraic equations can be number sentences (when both expressions are numerical), but often they contain symbols whose values have not been determined.

**Domain:** Stating what type of number the variable symbol represents is called stating its domain.

**Solution set:** The solution set of an equation written with only one variable is the set of all values one can assign to that variable to make the equation a true statement. Any one of those values is said to be a solution to the equation.

**Identity:** An identity is an equation that is always true.

**Addition Property of Inequality:** If  $A > B$ , then  $A + c > B + c$  for any real number  $c$ .

**Multiplication Property of Inequality:** If  $A > B$ , then  $kA > kB$  for any positive real number  $k$ .

**Compound sentence:** a sentence that contains at least two clauses

**Declarative sentence:** a sentence in the form of a statement

**Zero-product property:** The zero-product property says that If  $ab=0$ , then either  $a=0$  or  $b=0$  or  $a=b=0$ .

### Focus Area Topic C:

*Solving Equations and Inequalities*

*Lesson 10: True and False Equations*

<http://youtu.be/rLws1eCApuQ>

*Lesson 11: Solution Sets for Equations and Inequalities*

<http://youtu.be/UKI9JwG0Few>

*Lesson 12: Solving Equations*

<http://youtu.be/X6ecb50ZvkE>

*Lesson 13: Some Potential Dangers when Solving Equations*

<http://youtu.be/dVjO5y5YOBE>

*Lesson 14: Solving Inequalities*

<http://youtu.be/OoQXbJw4uiU>

*Lesson 15: Solution Sets of Two or More Equations (or Inequalities) Joined by "And" or "Or"*

<http://youtu.be/0b9A0roz8jQ>

*Lesson 16: Solving and Graphing Inequalities Joined by "And" or "Or"*

<http://youtu.be/vBv-6SIMAWA>

*Lesson 17: Equations Involving Factored Expressions*

<http://youtu.be/BO-NpNeuaK0>

*Lesson 18: Equations Involving a Variable Expression in the Denominator*

<http://youtu.be/Mw0CEpxDro4>

*Lesson 19: Rearranging Formulas*

<http://youtu.be/3j4xBHhfbF4>

*Lesson 20: Solution Sets to Equations with Two Variables*

[http://youtu.be/a-IIV2\\_I998](http://youtu.be/a-IIV2_I998)

*Lesson 21: Solution Sets to Inequalities with Two Variables*

<http://youtu.be/aQqEEVP0hB4>

*Lesson 22: Solution Sets to Simultaneous Equations*

<http://youtu.be/pOFfQOtdKb0>

*Lesson 23: Solution Sets to Simultaneous Equations*

<http://youtu.be/YfBNSNeSqWY>

*Lesson 24: Applications of Systems of Equations and Inequalities*

<http://youtu.be/VSPkbsje3Sw>

