Unit Map 2012-2013

Monroe #2 - Orleans BOCES (Regional Collaboration)

Collaboration / Math 6* / Grade 6 (Math Regional Curriculum)

Wednesday, October 31, 2012, 12:03PM

Standard/Module: Proficiency with Expressions and Equations 6.EE.7 (Week 12, 5 Weeks)

Stage 1: Desired Results

Standards Focus

- Major (70%) 6.NS.1, 6.NS.2

6th Grade CCS Map.pdf

Standards

NYS: CCLS:Mathematics, NYS: 6th Grade , Expressions & Equations
6.EE Reason about and solve one-variable equations and inequalities.

- 7. Solve real-world and mathematical problems by writing and solving equations of the form x + p = q and px = q for cases in which p, q and x are all nonnegative rational numbers.

Enduring Understandings	Essential Questions
1. Recognize that both sides of an equation are equal.	1. In what way does using inverse operations on both sides of the equal sign keep an equation balanced?
2. When using inverse operations, students must maintain both sides of the equation to be equal.	2. What are the two key steps in solving a one step equation?
	3. How can you prove that your solution is the correct solution for the equation?

Critical Content

1. Equation

2. Inverse operations

3. One step equations

4. Fluency in addition, subtraction, multiplication, and division in all operations of nonnegative rational numbers (whole numbers, decimals, fractions)

Skills	Vocabulary
1. Solve real-world and mathematical problems using equations. 2. Solve one step equations using inverse operations. 3. Fluently solve multiplication, division, addition, subtraction problems for all nonnegative rational numbers (whole numbers, decimals, fractions)	Tier 2 expression factor variable term constant evaluate simplify sum difference product quotient formula substitution balance rational Tier 3 equivalent expressions standard form exponential form factor form expanded form like terms

	inequality equation inverse operation reciprocal nonnegative

Stage 2: Assessment Evidence

Assessments

Formative: Other: Quiz

Give students a 10 question quiz. Each question will be a real-world problem involving have to write an equation and solving it.

Example:

Meagan spent $56.58 on three pairs of jeans. If each pair of jeans costs the same amount, write an algebraic equation that represents this situation and solve to determine how much one pair of jeans cost.

Stage 3: Learning Plan

Learning Activities	Resources
How Much Is That? Look for ads in newspapers that give prices of groceries, electronics, toys, sporting goods, and other items that are of interest to your student. Use the ads to have your student write an equation. Suppose an ad shows a bicycle on sale for $80. Examples of equations are shown below. Examples If you save $5 each week, write an equation that shows how long it would take to save $80? If you already have $25, write an equation which shows how much more you will need to buy the bicycle? **Traveling About Town** Look for opportunities to talk about equations when traveling by car, foot, bus, or train. Some examples of equations are shown below.	http://engageny.org/common-core/ http://illustrativemathematics.org/ www.livebinders.com/play/play/52180 http://illuminations.nctm.org/

Examples Suppose 8 people get off of a bus and 18 are left. What equation can you write to show how many people were on the bus to begin with?	http://www.mathsisfun.com/geometry/polyhedron.html
Suppose you buy 12 gallons of gas and your car gets 34 miles per gallon. What equation can you write to show how many miles you can drive?	http://www.korthalsaltes.com/

Differentiation Opportunities

Students create and solve equations that are based on real world situations. It may be beneficial for students to draw pictures that illustrate the equation in problem situations. Solving equations using reasoning and prior knowledge should be required of students to allow them to develop effective strategies.

Provide tiered questions with support like providing examples or the steps in solving an equation.

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