Unit Map 2012-2013

Monroe #2 - Orleans BOCES (Regional Collaboration)

Collaboration / Math 8* / Grade 8 (Math Regional Curriculum)

Wednesday, October 31, 2012, 1:39PM

Standard/Module: Proficiency with Functions: 8.EE.1 (Week 5, 5 Weeks)

Stage 1: Desired Results

Standards Focus

- Major (70%) 8.EE.2
  8.EE.5
  8.EE.6
  8.F.1

Grade 8 Map

Standards

NYS: CCLS:Mathematics, NYS: 8th Grade , Expressions & Equations

8.EE Work with radicals and integer exponents.

- 1. Know and apply the properties of integer exponents to generate equivalent numerical expressions.

Enduring Understandings	Essential Questions
Know and apply properties of integer exponents	How do the properties of integer exponents assist you in simplifying an expression?

Critical Content

1. Properties of integer exponents

- $x^a \bullet x^b = x^{a+b}$
- $x^a \div x^b = x^{a-b}$
- $x^{-a} = 1/x^a$
- $(x^a)^b = x^{ab}$

Equivalent numerical expressions

Skills	Vocabulary
1. Write and evaluate numerical expressions involving whole number exponents (6.EE.1). 2. Evaluate expressions with zero exponent. 3. Understand exponents as repeated multiplication (6.EE.1). 4. Compute fluently with integers. 5. Know properties of integer exponents. 6. Apply properties of integer exponents. 7. Generate equivalent numerical expressions using integer exponents.	Tier 2: evaluate, simplify Tier 3: base, exponent, integer, numerical expression, power

Stage 2: Assessment Evidence

Assessments

Properties of Exponents
Formative: Test: Written

Written test of the different properties of exponents (each property tested individually) and then include items with combinations of the properties.

Stage 3: Learning Plan

Learning Activities	Resources
Use expanded notation to help students derive the rules/properties of exponents. For example, (x • x • x) • (x • x • x • x • x) is the same as 8 x's being multiplied together, so $x^3 \bullet x^5 = x^8$, or I can add the exponents to get x^{3+5} or x^8. Use multiple examples of each property to help students see that these rules will apply every time.	www.illuminations.nctm.org www.illustrativemathematics.org

Differentiation Opportunities

If numbers are getting in the way, use variables or symbols. If the symbols are a struggle, try using numbers instead. Sometimes, numbers seem less abstract, but often times students want to simplify the expressions when numbers are present with variables, so they may not see the properties as readily.

<< Previous Year

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