Unit Map 2012-2013

Monroe #2 - Orleans BOCES (Regional Collaboration)

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

Wednesday, October 31, 2012, 2:10PM

Standard/Module: Proficiency with Equations: 8.EE.2 (Week 32, 8 Weeks)

Stage 1: Desired Results

Standards Focus

- Major (70%) 8.EE.1
  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.

- 2. Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where *p* is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that √2 is irrational.

Enduring Understandings

1. Understand that all non-perfect square roots and cube roots are irrational.
2. Evaluate and use square roots and cube roots to solve equations.

Essential Questions

1. Is the square/cube root of a number always smaller than the number itself?
2. What is the difference between square root and cube root of a number?
3. What is the relationship between squaring and square root? Cubing and cube root?

Critical Content

1. Square root symbol
2. Cube root symbol
3. Solutions to equations of the form $x^2 = p$ and $x^3 = p$, where *p* is a positive **rational number**.
4. Perfect squares
5. Small perfect cubes

Skills

1. Use square root and cube root symbols.
2. Use the cube root button on the calculator.
3. Evaluate square roots and cube roots.
4. Represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where *p* is a positive

Vocabulary

Tier 2: equations, evaluate

Tier 3: cube, cube root, inverse operation, radical, perfect cube, perfect square, square, square root, √

rational number (including fractions and decimals such as 9/16, 0.64) 5. Use inverse operations to solve equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive **rational number**. 6. Understand that all non-perfect square roots and cube roots are irrational.	

Stage 2: Assessment Evidence

Assessments

Evaluate square and cube roots
Formative: Test: Written

Students evaluate square and cube roots including those resulting in perfect cubes or perfect squares.

Stage 3: Learning Plan

Learning Activities	Resources
Evaluate square roots and cube roots. Represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive **rational number** (including fractions and decimals such as 9/16, 0.64). Use inverse operations to solve equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive **rational number**. Understand that all non-perfect square roots and cube roots are irrational.	www.illustrativemathematics.org www.illuminations.nctm.org

Differentiation Opportunities

Stick with whole numbers as long as possible to help "solidify" the concept for struggling students and gradually introduce fractions and decimals.

<< Previous Year

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