06 Topic: Square Root Radicals

Content Area: **Mathematics**
Course(s): **Algebra 2**
Time Period: **Semester 1**
Length: **2 weeks**
Status: **Published**

Standards

MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.N-RN.B.3	Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.
MA.K-12.4	Model with mathematics.
MA.F-IF.C.7b	Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.
MA.A-REI.A.2	Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.

Enduring Understandings

1. Mathematics is a language consisting of symbols and rules.
2. The same mathematical ideas can be represented concretely or symbolically.
3. There can be different strategies to solve a problem, but some are more effective and efficient than others.

Essential Questions

How will the student perform operations with square roots?

Why might $x^2=4$ have two solutions?

Knowledge and Skills

- Simplify Square Roots
- Multiply Square Roots
- Add and Subtract Square Root Radical Expressions
- Divide Square roots and rationalize the denominator
- Rationalize Square Roots with a binomial denominator

Transfer Goals

Using mathematical reasoning and strategic thinking can allow for practical solutions ot many problems.

Often unique vocabulary and implementation methods are needed to solve problems.

Resources

1. McDougal/Littell - Algebra & Trigonometry Structure & Method Book 2
2. Aufmann/Barker/Lockwood - Intermediate Algebra with Applications Sixth Edition
3. Houghton/Mifflin/Harcourt - On Core Mathematics Algebra 2
4. Holt - Algebra 2 with Trigonometry
5. Larson/Boswell - Big Ideas Math: Algebra 2 Texas Edition
6. Khan Academy
7. PurpleMath
8. KutaSoftware
9. CK-12
10. Quizlet
11. Albert I/O

12. Desmos
13. Problem Attic