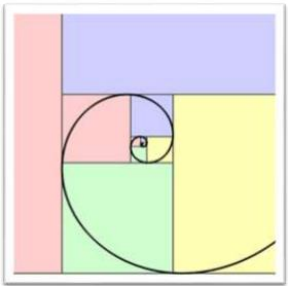
Algebra Concepts and Connections Unit 3: Investigating Rational and Irrational Numbers



Overview:

Students will investigate rational and irrational numbers and rewrite expressions involving square roots and cube roots. They should be able to use the operations of addition, subtraction, and multiplication, with radicals within expressions limited to square roots and cube roots. Additionally, they will be able to use and explain the properties of rational and irrational numbers. Through their work with rational and irrational numbers, students will come to understand that the operations of numbers from number sets do not yield the solution being from the same number set.

Learning Targets:

In Unit 3, students will:

- Rewrite algebraic and numeric expressions involving radicals
- Add, subtract, and multiply expressions limited to square roots and cube roots
- Show and explain the sum or product of rational numbers is rational
- Show and explain the sum of a rational number and an irrational number is irrational
- Show and explain the product of a nonzero rational number and an irrational number is irrational

Key Vocabulary: (linked to GA DOE Interactive Glossary)

Base	Coefficient	Exponent	Expression
Index	Irrational Number	Perfect Square	Power
Radical Expression	Radical Symbol	Rational Number	Root

Supporting Resources:

http://ctlslearn.cobbk12.org/

GA Virtual: Investigating Rational and Irrational Numbers Overview

Intro to rational & irrational numbers

Simplifying Radicals – Techniques & Examples

Squares and Square Roots