

Unit 10 Radical Expressions

Content Area: **Math**
Course(s): **CP Algebra 1**
Time Period: **Marking Period 4**
Length: **3**
Status: **Published**

Unit Overview

This unit allows students to master rules of radicals and understanding perfect square values. Students will also see how these relate this back to rational and irrational numbers.

Enduring Understandings

- Students will understand how to apply the rules of algebra to manipulate variables.
- Students will understand the basic rules for performing operations with expressions involving radicals.

Essential Questions

How can we write an unknown as an algebraic expression?

How can we evaluate algebraic expressions?

How can we use the properties of algebra to simplify expressions?

What is a rational number verses an irrational number?

What distinguishes a rational number from an irrational number involving radicals?

How can we simplify an expression involving radical values?

Why is re-writing an expression important?

How are radical expressions represented?

New Jersey Student Learning Standards (No CCS)

MA.A-REI.A.2	Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.
MA.A-REI.D.11	Explain why the x -coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.

Interdisciplinary Connections

LA.W.9-10.6	Use technology, including the Internet, to produce, share, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.
SCI.HS-ETS1-2	Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.
TECH.8.1.12.C.CS4	Contribute to project teams to produce original works or solve problems.

Technology Standards

TECH.8.1.12.C.CS4	Contribute to project teams to produce original works or solve problems.
TECH.8.1.12.D.CS3	Exhibit leadership for digital citizenship.
TECH.8.1.12.E.CS4	Process data and report results.
TECH.8.1.12.F.CS3	Collect and analyze data to identify solutions and/or make informed decisions.
TECH.8.1.12.F.CS4	Use multiple processes and diverse perspectives to explore alternative solutions.
TECH.8.2.12.C.CS2	The application of engineering design.

21st Century Themes/Careers

CAEP.9.2.12.C.3	Identify transferable career skills and design alternate career plans.
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Financial Literacy Integration

PFL.9.1.12.C.1	Compare and contrast the financial benefits of different products and services offered by a variety of financial institutions.
PFL.9.1.12.C.2	Compare and compute interest and compound interest and develop an amortization table using business tools.
PFL.9.1.12.C.3	Compute and assess the accumulating effect of interest paid over time when using a variety of sources of credit.

