

# Unit 10 Radical Expressions Trial

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

## Unit Overview

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This unit allows students to master rules of radicals and understanding perfect square values. Students will also see how these relate to equations involving radicals.

## Enduring Understandings

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- Students will understand how to apply the rules of algebra to manipulate variables.
- Students will understand how to keep an equation balanced and how to solve for an unknown to solve for a solution.
- Students will understand the similarities and differences in solving inequalities versus equations.
- The students will understand the concept of a function and how we can represent functions graphically, in a table, and by a rule.
- The students need to understand how the inverse operations of multiplying and factoring are related in simplifying and expanding expressions, and the importance of these methods in other areas of math.
- Students will understand the distinguishing features of a quadratic model, and how to find these features graphically and algebraically.

## Essential Questions

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How are radical expressions represented?

What are the characteristics of square root functions and when do they arise?

## New Jersey Student Learning Standards (No CCS)

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MA.F-IF

Interpreting Functions

MA.F-IF.B

Interpret functions that arise in applications in terms of the context

MA.S-ID.B.6a	Fit a function to the data (including with the use of technology); use functions fitted to data to solve problems in the context of the data.
MA.F-IF.C.8	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.
MA.F-IF.C.8a	Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context.
MA.F-BF.B	Build new functions from existing functions

## Amistad Integration

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SOC.9-12.1.1.1	Compare present and past events to evaluate the consequences of past decisions and to apply lessons learned.
SOC.9-12.1.3.3	Gather relevant information from multiple sources representing a wide range of views (including historians and experts) while using the date, context, and corroborative value of the sources to guide the selection.

## Holocaust/Genocide Education

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SOC.9-12.1.1.1	Compare present and past events to evaluate the consequences of past decisions and to apply lessons learned.
SOC.9-12.1.3.3	Gather relevant information from multiple sources representing a wide range of views (including historians and experts) while using the date, context, and corroborative value of the sources to guide the selection.

## Interdisciplinary Connections

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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

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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**

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CAEP.9.2.12.C.3

Identify transferable career skills and design alternate career plans.

## **Financial Literacy Integration**

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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.

## **Instructional Strategies & Learning Activities**

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- Use modeling activities and discovery lessons.
- Provide access to online book
- Provide access to book pages and problems through Canvas and Twitter
- Provide access to review keys

## **Formative Assessments**

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- Daily homework checks
- Quiz
- Chapter Test
- Exit Tickets
- Warm-ups

## **Summative Assessment**

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- Unit Test
- Unit Project

## **Alternate Assessments**

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- Modified homework
- Modified quizzes
- Modified tests

- Modified projects