

Unit 3 Solving Inequalities

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

Unit Overview

This unit allows students to master creating and reasoning equations and inequalities. Students will be able to represent relationships between quantities that are not equal.

Link to optional Desmos Curriculum:

<https://teacher.desmos.com/collection/61bcc95700581818dff1d4d7?intro-banner-expanded=true>

Enduring Understandings

- 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.
- Students will be able to understand the language of phrases like at least and at most and apply these to inequality statements.

Essential Questions

How can we write an unknown as an algebraic inequality?

How can we solve algebraic inequality?

How can we use the properties of algebra to solve inequalities?

How can we isolate an unknown quantity?

How can we apply the concept of inequalities to real world applications?

How do we compare and contrast inequalities with equations?

Why do we need to shade a region for an inequality?

What does the line represent in the inequality?

What does the absolute value equation represent and how are they related to inequalities?

New Jersey Student Learning Standards (No CCS)

MA.F-IF.B	Interpret functions that arise in applications in terms of the context
MA.F-IF.C	Analyze functions using different representations
MA.F-BF.B	Build new functions from existing functions
MA.A-REI	Reasoning with Equations and Inequalities
MA.A-REI.D	Represent and solve equations and inequalities graphically

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.