

Solving Equations

YouTube Video Link: No Video Available

Lesson Overview

In this lesson, students will use focused listing to activate their knowledge about “identity” and then brainstorm strategies for solving equations. Students will summarize their learning by writing Proof Paragraphs for given equations.

Standards Addressed

8.EE.7 Solve linear equations in one variable.

Disciplinary Literacy Best Practices

Focused Listing
Brainstorming
Proof Paragraph

Lesson Plan

Time Required: Two 50-minute Class Periods

Disciplinary Vocabulary: variables, identity, infinitely many solutions, no solution, one solution

Assessment: Exit Ticket

Engage

- Students will use the strategy “Focused Listing” to activate knowledge about “identity.”
- In groups of 2 or 3, students will make a list as long as they can of various definitions of “identity”.

Explore

- Students will use prior knowledge of solving equations to brainstorm strategies for solving equations that have variables on both sides of the equal sign.
- Students will test their strategies on provided example equations to determine if the strategy works to solve the equation.
- Equations should be provided that have infinitely many solutions (identities), as well as equations with no solution and equations with one solution.

Explain

- After students have agreed on a strategy that works to solve any equation, they will use Proof Paragraph to justify the solution to a given equation.
- In the Proof Paragraph, students will solve an equation on the left side of their paper and write a sentence justification for each step of the equation on the right side of the paper.
- Exit Ticket: Solve: $2(x + 4) - 5 = 3x - 8$

Teacher Biographical Information

Lesson Author:

Brenna Abrams is in her 10th year of teaching middle school math – 9 of which have been at Bell Street Middle School in Clinton. Ms. Abrams worked in the Banking industry for 6 years before she became a PACE teacher in 2004. Ms. Abrams loves her 8th graders and cannot imagine doing any other kind of work.