



Solving an Equation

By: Jessica Shaffer

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Math
Grades 9–12



Introduction

Re-introduce yourself to variables and solving equations with variables! Don't get too comfortable in your seat; you are going to be scooting around the room with a partner to complete this activity!

Learning Objectives

([CCSS.MATH.CONTENT.HSA.REI.C.6](#)) WALT solve linear equations with variables on both sides.

Materials Needed

- [Activity sheets](#)
- [Answer sheet](#)

Procedure

1. Review the skill of solving equations and inequalities. Here are some different videos you can share with the students to do so. You can either show to the class, or a better option if you have class devices is to have students watch on their chromebooks while they listen with headphones.
 - [Why Do We Do the Same Thing to Both Sides?](#)
 - [Intro to Equations with Variables on Both Sides](#)
 - [Equations with Variables on Both Sides](#)
2. Have students complete [these four practice problems](#) before beginning the activity.
3. Have students group themselves, set the groups how you wish, or have a random group generator do it for you! Students will be on the clock to solve these 10 different problems. Students will be given 25 minutes to complete this assignment. You can have students move to the questions at random (going to a station that is unoccupied or put a timer on giving the students two and half minutes at each station. This timing helps to prepare students for timed standardized tests and working under pressure. This is a good skill to weave into lessons when possible.
4. Students will complete the Answer Sheets for the activity with their partner/group. Each student will have their own Answer Sheet but will collaborate to solve the problems. Students need to also show the check for their work (including solving the equations by using the solution as the value for the variable in the equations).

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- At the end of the time, students will sit with their partner/group. They will join up with another group to go over the answers to the problems. Any differences in answers should be discussed by the now larger group. This should last for about five minutes.
- Finally, as a class, go over the questions and answers. Model how to solve any of the problems that gave students difficulty. These sheets can be handed in for a classwork grade.
- For early finishers (ones that complete the activity before the 25 minutes is up), you can have them work on:
 - Existing Math Centers in the classroom
 - Prodigy, Freckle, or any other online platform for individual goals
 - Games to extend learning:
 - [Integer Tilt](#)
 - [2048](#)
 - [Solve Equations](#)

Evaluation

There is no rubric with this activity. You can use this as a classwork grade or grade it as a quiz grade. You can either score it according to a percentage or grade it on a scale, whatever suits your classroom best.

Answer Key:

- $x = -15$
- $a = -8$
- $c = 1$
- $q = \text{all real numbers}$
- $n = -11$
- $p = 7$
- $y = 4$
- $k = -26$
- $r = -80$
- $s = 10$