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Resource ID#: 42364

Primary Type: Problem-Solving Task

Solving Equations

In this activity, the student is asked to solve a variety of equations (one solution, infinite solutions, no solution) in the traditional algebraic manner and to use pictures of a pan balance to show the solution process.

Solving Equations (Microsoft Word): This file includes the task and related information in Microsoft Word format.

Solving Equations (PDF): This file includes the task and related information in PDF format.

General Information

Subject(s): Mathematics

Grade Level(s): 8

Intended Audience: [Educators](#), [Students](#), [Parents](#)

Instructional Time: 15 Minute(s)

Freely Available: Yes

Keywords: Solving Equations, solving, equations, linear equations, variable, cpalms, icpalms, illustrativemathematics.org, illustrative mathematics, tasks, mathematics, math, Florida standards, resource, free, freely available, problems-based learning, student activities, balance, solutions

Instructional Component Type(s): [Problem-Solving Task](#)

Resource Collection: Illustrative Mathematics

Source and Access Information

Contributed by: Brian Carmichael

Name of Author/Source: Brian Carmichael

District/Organization of Contributor(s):

Is this Resource freely Available? Yes

Access Privileges: Public

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Aligned Standards

Name	Description
	Solve linear equations in one variable. a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers). b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.
MAFS.8.EE.3.7:	Clarifications: Fluency Expectations or Examples of Culminating Standards

Students have been working informally with one-variable linear equations since as early as kindergarten. This important line of development culminates in grade 8 with the solution of general one-variable linear equations, including cases with infinitely many solutions or no solutions as well as cases requiring algebraic manipulation using properties of operations. Coefficients and constants in these equations may be any rational numbers.

Examples of Opportunities for In-Depth Focus

This is a culminating standard for solving one-variable linear equations.