

Solving Equations with Variables on Both Sides Guided Notes

An equation with variable on both sides means the variable is on both sides of the equality.

Mathematically, it is of the form:

$$ax \pm b = cx \pm d$$

Equations with One Solution

In this case, exactly one solution exists for the equation.

Problem 1: Solve $5x - 2 = 2x - 14$.

Identity Equation

An identity equation is an equation that is true for every value of the variable.

Solving Equations with Variables on Both Sides Guided Notes

Problem 2: Solve $5(2x - 2) = 2(5x - 5)$.

This equation is an identity equation since all the values of x are the solutions to this equation.

Equation with No Solution

An equation in which the variable on both sides gets cancelled out but the remaining sides are not equal is an equation with no solution.

Problem 3: Solve $9x - 4 = -3x + 5 + 12x$.