3.1 Solving Two-Step Equations
Common Core Standards

Equations and Expressions 8.EE

Analyze and solve linear equations and pairs of simultaneous linear equations

7. 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.
LT: I can solve 2-step equations.

Recall PEMDAS!
To solve a two step equation you will use Order of Operations in REVERSE

\[ \frac{x}{2} + 5 = 11 \]

What is your first step in solving this equation?
LT: I can solve 2-step equations.

Solve the equation.

4y - 4 = 16
Solve Two Step Equations

Objective: You will learn how to solve two step equations

Solve the equation by balancing.

Can you solve the equation represented using another method?
Solve Two Step Equations

Objective: You will learn how to solve two step equations

Solve the equation.

6n - 2 = 10

A. -4
B. -1
C. 2
D. 1
Solve Two Step Equations

Objective: You will learn how to solve two step equations

\[ 6x - 2x = 28 \]
\[ 5 - 2x = 11 \]
\[ 50 = 7y - 6 \]
\[ \frac{t}{3} - 3 = 9 \]
Solve Two Step Equations

Objective: You will learn how to solve two step equations

\[4x + 3 = 27\]
\[\frac{x}{7} + 3 = -2\]
\[6m - 4 = 14\]
\[\frac{1}{2}x - 6 = 10\]
Solve Two Step Equations

Objective: You will learn how to solve two step equations

You and your family are taking a ski vacation. Your family paid $2860 to rent a house for 5 days and for 4 ski passes. You were charged $1500 to rent the house. How much was each ski pass?

Use the diagram to help you write and solve an equation:

\[
\text{Number of ski passes purchased} \times \text{Cost of ski pass} + \text{Cost of house} = \text{Total Amount Paid}
\]
Solve Two Step Equations

Objective: You will learn how to solve two step equations

You are ordering roses that cost $1.25 each from a flower catalog. You have $24 to spend. If the shipping cost is $4 for any size order, how many roses can you order?

Use the diagram to help you write and solve an equation

\[
\text{Number of roses purchased} \times \text{Cost of each rose} + \text{Shipping Cost} = \text{Amount of Money to Spend}
\]