

Name: _____ Date: _____

Lab 6-5: Solving Two-Step Equations

When two steps are needed to solve an equation, add or subtract first.

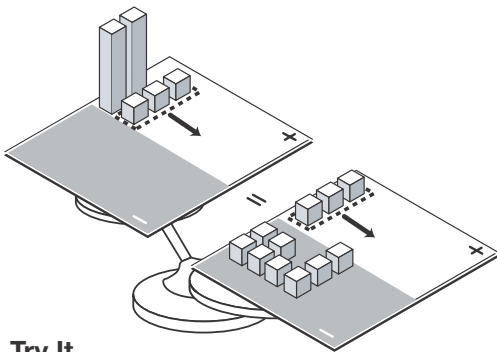
Example: Solve $2x + 3 = -5$

Step 1.

Model the equation.

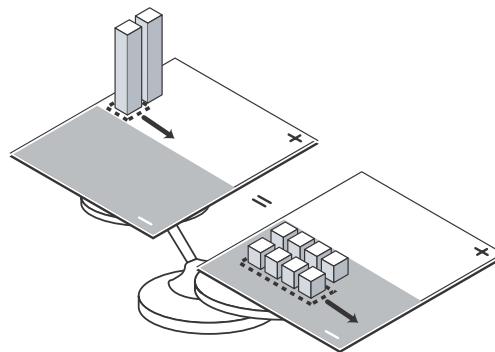
Step 2a.

Add 3 zero pair to the right side. Then subtract 3 from both sides.



Step 2b.

The equation is now $2x = -8$. Divide both side by 2. Make 2 equal groups on the right side. Then remove equal quantities.



Step 3.

Read the mat.

$$x = -4$$

Step 4.

Record.

$$2x + 3 = -5$$

$$2x + 3 - 3 = -5 - 3$$

$$2x = -8$$

$$2x \div 2 = -8 \div 2$$

$$x = -4$$

Try It

- The first step is to get the variable term $2x$ alone. How do you do this? _____

- How do you know whether to add or to subtract in Step 2a? _____

Practice

Use Algebra blocks to solve each equation. The first step in the solution is described.

- $3y - 1 = 8$ Add 1 to both sides to get _____ Solution: $y =$ _____
- $2 + 5x = 12$ Subtract 2 from both sides to get _____ Solution: $x =$ _____
- $2x - 3 = 5$ Add 3 to both sides to get _____ Solution: $x =$ _____
- $-7 = 2y + 1$ Subtract 1 from both sides to get _____ Solution: $y =$ _____
- $11 = 4x - 5$ Add 5 to both sides to get _____ Solution: $x =$ _____

Solve each equation.

- $6x + 8 = 14$ $x =$ _____
- $16 = 6 + 2y$ $y =$ _____
- $5x - 6 = 9$ $x =$ _____
- $16 = 3y - 5$ $y =$ _____
- $2x + 3 = -9$ $x =$ _____
- $-8 = 3y - 2$ $y =$ _____