Name _____ Class _____ Date _____

Reteaching 2-1

Solving Two-Step Equations

OBJECTIVE: Solve two-step equations
Use deductive reasoning

MATERIALS: None

The order of operations tells you to do multiplication and division before you do addition and subtraction. However, when solving two-step equations, you must first do any addition or subtraction necessary to isolate the variable on one side of the equation. Start by asking yourself, "Has any adding or subtracting been done to the variable?" If the answer is yes, perform the inverse operation. Then repeat this step for multiplication and division.

Example

Write the steps and solve the equation.

$3x + 4 = 10$	←	**Think: Is any adding or subtracting being done to the variable? 4 is being added. What is the inverse of adding 4?**
$3x + 4 - 4 = 10 - 4$	←	**Subtract 4 from each side.**
$3x = 6$	←	**Simplify.**
$3x = 6$	←	**Think: Is any multiplying or dividing being done to the variable? It is being multiplied by 3. What is the inverse of multiplying by 3?**
$\frac{3x}{3} = \frac{6}{3}$	←	**Divide each side by 3.**
$x = 2$	←	**Simplify.**

Exercises

Fill in the blanks to complete the steps and solve the equation.

1.	$\frac{s}{6} - 5 = -8$	←	**Think: Is any adding or subtracting being done to the variable? _____ is being _____ . What is the _____ of subtracting 5?**
	$\frac{s}{6} - 5 + 5 = -8 + 5$	←	**_____ 5 to _____ side.**
	$\frac{s}{6} = -3$	←	**Simplify.**
	$\frac{s}{6} = -3$	←	**Think: Is any multiplying or dividing being done to the variable? It is being _____ by 6. What is the inverse of _____ by 6?**
	$6\left(\frac{s}{6}\right) = 6(-3)$	←	**Multiply each _____ by _____ .**
	$s =$ _____	←	**Simplify.**

Solve each equation.

2. $3x - 4 = 8$

3. $\frac{x}{4} + 3 = 10$

4. $4y + 5 = -7$

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