Name _____ Date _____ Class _____

SECTION 1B

Ready to Go On? Skills Intervention

1-7 Equations and Their Solutions

Vocabulary
equation
solution

An **equation** is a mathematical statement that says the quantity on the left side of the equal sign has the same value as the quantity on the right of the equal sign.

Equations may contain variables. If a value for a variable makes an equation true, that value is a **solution** of the equation.

Determining Solutions of Equations

Determine whether the given value of the variable is a solution.

A. $t + 38 = 59$ for $t = 25$

$t + 38 = 59$

$\_\_\_\_\_ + 38 \stackrel{?}{=} 59$ What number should you substitute for t?

$\_\_\_\_\_ \stackrel{?}{=} 59$ Add.

Are the two numbers equal? _____

True or False: 25 is a solution to $t + 38 = 59$. _____

B. $12 \cdot h = 108$ for $h = 9$

$12 \cdot h = 108$

$12 \cdot \_\_\_\_\_ \stackrel{?}{=} 108$ What number should you substitute for h?

$\_\_\_\_\_ \stackrel{?}{=} 108$ Multiply.

Are the two numbers equal? _____

True or False: 9 is a solution to $12 \times h = 108$. _____

C. $196 \div p = 14$ for $p = 14$

$196 \div p = 14$

$196 \div \_\_\_\_ \stackrel{?}{=} 14$ What number should you substitute for p?

$\_\_\_\_ \stackrel{?}{=} 14$ Divide.

Are the two numbers equal? _____

True or False: 14 is a solution to $196 \div p = 14$. _____

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SECTION 1B

Ready to Go On? Problem Solving Intervention

1-7 Equations and Their Solutions

You can use math sense to tell whether a number could reasonably be a solution to an equation.

Match the solution with the equation.

$\frac{h}{3} = 72$	$h = 24$
$1102 = h + 1098$	$h = 4$
$3h = 72$	$h = 216$

Understand the Problem

1. What does it mean for a number to be a solution to an equation?

_____

_____

Make a Plan

2. How can you use math sense to match the solutions to the equations?

_____

_____

Solve

3. Which solution matches each equation? Explain.

_____

_____

_____

Check

4. Substitute to check each solution.

_____

_____

_____

Which choice best describes the solution to the equation?

5. $9x = 5000$ **a.** $x < 9$ **b.** $x > 500$ **c.** $x > 5000$ _____

6. $9 - z = 5000$ **a.** $z > 0$ **b.** $z < 5000$ **c.** $z > -5000$ _____