

LESSON
3-6 **Interactive Study Guide**
Solving Equations Containing Integers

man
notes

To solve an equation, use the opposite operation to isolate the variable. The opposite of addition is subtraction and the opposite of multiplication is division.

Solving Equations by Adding or Subtracting

Solve. Check your answer.

A. $x - 6 = 3$

What is the variable? _____

What number should you add to both sides of the equation? _____

$x =$ _____

What does x equal? _____

Check:

$x - 6 \stackrel{?}{=} 3$

What do you substitute into the original equation to check? _____

_____ - 6 $\stackrel{?}{=} 3$

Subtract. Does the solution check? _____

_____ = 3 ✓

B. $a + 5 = 13$

What do you subtract from both sides of the equation? _____

What does a equal? _____

$a =$ _____

Check:

$a + 5 \stackrel{?}{=} 13$

What do you substitute into the original equation to check? _____

_____ + 5 $\stackrel{?}{=} 13$

Add. Does the solution check? _____

_____ = 13 ✓

Solving Equations by Multiplying or Dividing

Solve. Check your answer.

$\frac{g}{6} = -5$

What is the variable? _____

$\left(\frac{g}{6}\right) = (-5)$

Multiply both sides of the equation by _____ to isolate g .

$g =$ _____

What does g equal? _____

Check:

$\frac{g}{6} \stackrel{?}{=} -5$

What do you substitute into the original equation to check? _____

$\frac{\quad}{6} \stackrel{?}{=} -5$

Divide. Does the solution check? _____

_____ = -5 ✓