

Another Look

For use with Lesson 3-3.

Solving Two-Step Equations

Solve two-step equations by undoing the operations one at a time. First add or subtract, then multiply or divide.

$$\begin{array}{r}
 -3x - 5 = -17 \\
 -3x - 5 + 5 = -17 + 5 \\
 -3x = -12 \\
 \frac{-3x}{-3} = \frac{-12}{-3} \\
 x = 4
 \end{array}$$

5 has been subtracted, so add 5 to each side.

x has been multiplied by -3, so divide each side by -3.

Check: $-3 \cdot 4 - 5 = -12 - 5 = -17$

Solve.

1. $2x - 5 = 3$

Add -5.

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

$$2x = 8$$

Divide by 2.

$$\frac{2x}{2} = \frac{8}{2}$$

$$x = 4$$

2. $4x - 1 = -9$

Add 1.

$$4x - 1 + 1 = -9 + 1$$

$$4x = -8$$

Divide by 4.

$$\frac{4x}{4} = \frac{-8}{4}$$

$$x = -2$$

3. $-3x - 2 = -14$

$$-3x - 2 + 2 = -14 + 2$$

$$-3x = -12$$

$$x = 4$$

4. $-2x - 2 = 4$

5. $4x + 16 = 8$

6. $5x + -2 = 8$
