Lesson 3 Reteach

Write Two-Step Equations

Some verbal sentences translate into two-step equations.

Example 1

Translate each sentence into an equation.

Sentence	**Equation**
Four more than three times a number is 19.	$3n + 4 = 19$
Five is seven less than twice a number.	$5 = 2n - 7$
Seven more than the quotient of a number and 3 is 10.	$7 + \frac{n}{3} = 10$

After a sentence has been translated into a two-step equation, you can solve the equation.

Example 2

Translate the sentence into an equation. Then find the number.
Thirteen more than five times a number is 28.

Words   Thirteen more than five times a number is 28.

Variable   Let $n =$ the number.

Equation

$$5n + 13 = 28 \qquad \text{Write the equation.}$$
$$\underline{-13 = -13} \qquad \text{Subtraction Property of Equality}$$
$$5n = 15 \qquad \text{Simplify.}$$
$$\frac{5n}{5} = \frac{15}{5} \qquad \text{Division Property of Equality}$$
$$n = 3$$

Therefore, the number is 3.

Exercises

Define a variable. Then translate each sentence into an equation.
Then find each number.

1. Five more than twice a number is 7.
   Let *n* represent the number. 2*n* + 5 = 7; 1

2. Fourteen more than three times a number is 2.
   Let *n* represent the number. 3*n* + 14 = 2; −4

3. Seven less than twice a number is 5.
   Let *n* represent the number. 2*n* − 7 = 5; 6

4. Two more than four times a number is −10.
   Let *n* represent the number. 4*n* + 2 = −10; −3

5. Eight less than three times a number is −14.
   Let *n* represent the number. 3*n* − 8 = −14; −2

6. Three more than the quotient of a number and 2 is 7. **Let *n* represent the number.**
   $\frac{n}{2} + 3 = 7; 8$