



## Solving a Linear Equation: Problem Type 3

### • Example 1

If  $3x - 8 = 10$ , what is the value of  $8x + 14$ ?

We first solve  $3x - 8 = 10$  for  $x$ .

$$3x - 8 = 10$$

$$3x = 18$$

$$x = 6$$

Now substitute the value for  $x$  into the expression  $8x + 14$ .

$$8 \cdot 6 + 14 = 62$$

The solution is 62.

### ● ● ● CHECK YOURSELF 1

Solve.

If  $2x - 7 = 1$ , what is the value of  $10x - 9$ ?

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### ● ● ● CHECK YOURSELF ANSWER

1. 31.

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# 2.8 Exercises

Name \_\_\_\_\_

Section \_\_\_\_\_

Date \_\_\_\_\_

## A N S W E R S

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_

Use the solution of the equation to find the value of the given expression.

1.  $4x - 3 = 1$ ;  $3x + 12$

2.  $10x - 1 = 19$ ;  $8x + 3$

3.  $x - 14 = 6$ ;  $2x - 10$

4.  $3x - 15 = 15$ ;  $-x + 14$

5.  $7x - 9 = 12$ ;  $4x - 7$

6.  $3x - 9 = 15$ ;  $6x - 10$

7.  $9x + 8 = 35$ ;  $-3x + 4$

8.  $4x - 5 = 43$ ;  $-2x + 9$

9.  $3x - 16 = 26$ ;  $-x + 15$

10.  $-6x - 10 = 14$ ;  $3x + 7$

11.  $4x + 6 = 30$ ;  $-3x + 35$

12.  $-5x - 18 = 17$ ;  $2x + 20$