

**◆ Skill B** Dividing expressions

**Recall** When you divide an expression by a number, you must divide each term in the numerator by that number.

**◆ Example 1**

Simplify the expression  $\frac{6a + 24}{6}$ .

**◆ Solution**

Use the Distributive Property.

$$\begin{aligned} \frac{6a + 24}{6} &= \frac{6a}{6} + \frac{24}{6} \\ &= a + 4 \end{aligned}$$

Write a sum.

Divide each numerator by 6.

Thus,  $\frac{6a + 24}{6} = a + 4$ .

**◆ Example 2**

Simplify the expression  $\frac{8(3x - 9)}{6}$ .

**◆ Solution**

Use the Distributive Property.

$$\begin{aligned} \frac{8(3x - 9)}{6} &= \frac{24x - 72}{6} \\ &= \frac{24x}{6} - \frac{72}{6} \\ &= 4x - 12 \end{aligned}$$

Write a difference.

Divide each numerator by 6.

Thus,  $\frac{8(3x - 9)}{6} = 4x - 12$ .

**Simplify the following expressions. Use the Distributive Property if needed.**

11.  $\frac{63a}{-9}$  \_\_\_\_\_

12.  $\frac{-450n}{10}$  \_\_\_\_\_

13.  $\frac{18x + 12}{-6}$  \_\_\_\_\_

14.  $\frac{8k - 12}{-4}$  \_\_\_\_\_

15.  $\frac{70x - 30y}{-5}$  \_\_\_\_\_

16.  $\frac{35x + 210y}{7}$  \_\_\_\_\_

17.  $\frac{3(2x + 4y)}{6}$  \_\_\_\_\_

18.  $\frac{(3x - 8)6}{2}$  \_\_\_\_\_

19.  $\frac{6(5 + 10x)}{10}$  \_\_\_\_\_

20.  $\frac{12(x - 3y)}{4}$  \_\_\_\_\_

21.  $\frac{(5y + 8)3.4}{2}$  \_\_\_\_\_

22.  $\frac{7(-4a - 6)}{1.4}$  \_\_\_\_\_