

## Lesson 9-6

## Example 1

Simplify.

a.  $\frac{-12rs}{4s}$

b.  $\frac{xyz}{z}$

## Solution

$$\begin{aligned} \text{a. } \frac{-12rs}{4s} &= \frac{-12}{4} \cdot \frac{rs}{s} \\ &= -3 \cdot r \\ &= -3r \end{aligned}$$

$$\begin{aligned} \text{b. } \frac{xyz}{z} &= \frac{xy}{1} \\ &= xy \end{aligned}$$

## Example 2

Simplify.

a.  $\frac{30x^{10}}{-6x^2}$

b.  $\frac{-52m^6n^7}{-4m^2n}$

## Solution

$$\begin{aligned} \text{a. } \frac{30x^{10}}{-6x^2} &= 1 \frac{30}{-6} x^{10-2} \\ &= -5x^8 \end{aligned}$$

$$\begin{aligned} \text{b. } \frac{-52m^6n^7}{-4m^2n} &= 1 \frac{-52}{-4} m^{6-2} n^{7-1} \\ &= 13m^4n^6 \end{aligned}$$

## Example 3

Simplify.

a.  $\frac{15t + 25}{5}$

b.  $\frac{18z^5 + 27z^4 + 9z^3}{9z^3}$

## Solution

$$\text{a. } \frac{15t + 25}{5} = \frac{15t}{5} + \frac{25}{5} = 3t + 5 \quad \text{Divide each term of the polynomial by the divisor.}$$

$$\text{b. } \frac{18z^5 + 27z^4 + 9z^3}{9z^3} = \frac{18z^5}{9z^3} + \frac{27z^4}{9z^3} + \frac{9z^3}{9z^3} = 2z^2 + 3z + 1$$