## Example 2 Simplify Complex Fractions

A quotient is defined as quotient = dividend divisor. So you can check your solution by showing quotient • divisor = dividend.

## Find the quotient.

a. 
$$\frac{-\frac{2}{5}}{9} = -\frac{2}{5} \div \frac{9}{1} = -\frac{2}{5} \cdot \frac{1}{9} = -\frac{2}{45}$$

**b.** 
$$\frac{1}{\frac{-5}{8}} = 1 \div \left(\frac{-5}{8}\right) = 1 \cdot \left(\frac{-8}{5}\right) = \frac{-8}{5} = -\frac{3}{5}$$

## Checkpoint Find the quotient.

1. $-10 \div \frac{1}{3}$		2. $3\frac{1}{3} \div 1\frac{1}{4}$	
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1	1 3C	and measure	3-43
3. $\frac{2}{-5}$		4. $\frac{-6}{1}$	
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## THE SIGN OF A QUOTIENT RULE

The quotient of two numbers with the same sign is the

$$-a \div (-b) = a \div b = \frac{a}{b}$$
 Examples:  $-18 \div -3 = 6$ 
 $18 \div 3 = 6$ 

The quotient of two numbers with opposite signs is negotive

$$-a \div b = a \div (-b) = -\frac{a}{b}$$
 Examples:  $-18 \div 3 = \frac{0}{b}$  18 ÷  $-3 = \frac{0}{b}$