Example 3 *Evaluate an Expression*

Evaluate the expression when $a = 9$ and $b = -4$.

a. $\frac{3b}{a-b} = \frac{3(-4)}{9-(-4)}$

Substitute 9 for a and -4 for b.

$= \frac{-12}{13}$

Simplify $3(-4)$ and $9-(-4)$.

$= -\frac{12}{13}$

Sign of Quotient rule

b. $\frac{a+2b}{3} = \frac{9+2(-4)}{3}$

Substitute 9 for a and -4 for b.

$= \frac{9+(-8)}{3} = \frac{1}{3}$

Simplify.

Example 4 *Simplify an Expression*

$\frac{56x-14}{7} = (56x-14) \div 7$

Rewrite fraction as DIVISION expression.

$= (56x-14) \cdot \frac{1}{7}$

Multiply by $\frac{1}{7}$.

$= (56x)\left(\frac{1}{7}\right) - (14)\left(\frac{1}{7}\right)$

Use Distributive property.

$= 8x-2$

Simplify.

Checkpoint **Complete the following exercises.**

5. Evaluate $\frac{a}{-2b}$ when $a = -\frac{1}{5}$ and $b = \frac{11}{20}$.

$\frac{2}{11}$

6. Simplify $\frac{12x-30}{6}$.

$2x-5$