

EXAMPLE 4 Simplify an expressionSimplify the expression $\frac{36x - 24}{6}$.**ANOTHER WAY**

You can simplify the expression by first rewriting it as a difference of two fractions: $\frac{36x - 24}{6} = \frac{36x}{6} - \frac{24}{6} = 6x - 4$.

$$\frac{36x - 24}{6} = (36x - 24) \div 6$$

Rewrite fraction as division.

$$= (36x - 24) \cdot \frac{1}{6}$$

Division rule

$$= 36x \cdot \frac{1}{6} - 24 \cdot \frac{1}{6}$$

Distributive property

$$= 6x - 4$$

Simplify.

**GUIDED PRACTICE** for Examples 3 and 49. Find the mean of the numbers -3 , 4 , 2.8 , and -1.5 .10. **TEMPERATURES** Find the mean daily maximum temperature (in degrees Fahrenheit) in Barrow, Alaska, for the first 5 days of February 2004.

Day in February	1	2	3	4	5
Maximum temperature (°F)	-3	-20	-21	-22	-18

Simplify the expression.

11. $\frac{2x - 8}{-4}$

12. $\frac{-6y + 18}{3}$

13. $\frac{-10z - 20}{-5}$

OPERATIONS ON REAL NUMBERS In this chapter, you saw how to find the sum, difference, product, and quotient of two real numbers a and b . You can use the values of a and b to determine whether the result is positive, negative, or 0.

CONCEPT SUMMARY*For Your Notebook***Rules for Addition, Subtraction, Multiplication, and Division**Let a and b be real numbers.

Expression	$a + b$	$a - b$	$a \cdot b$	$a \div b$
Positive if...	the number with the greater absolute value is positive.	$a > b$.	a and b have the same sign ($a \neq 0, b \neq 0$).	a and b have the same sign ($a \neq 0, b \neq 0$).
Negative if...	the number with the greater absolute value is negative.	$a < b$.	a and b have different signs ($a \neq 0, b \neq 0$).	a and b have different signs ($a \neq 0, b \neq 0$).
Zero if...	a and b are additive inverses.	$a = b$.	$a = 0$ or $b = 0$.	$a = 0$ and $b \neq 0$.