

2.3 Subtract Real Numbers



TEKS a.1, a.6;
8.2.B

Before

You added real numbers.

Now

You will subtract real numbers.

Why?

So you can find a change in temperature, as in Ex. 43.

Key Vocabulary
• opposites, p. 66

Because the expressions $12 - 3$ and $12 + (-3)$ have the same value, 9, you can conclude that $12 - 3 = 12 + (-3)$. Subtracting 3 from 12 is equivalent to adding the opposite of 3 to 12. This example illustrates the *subtraction rule*.

KEY CONCEPT

For Your Notebook

Subtraction Rule

Words To subtract b from a , add the opposite of b to a .

Algebra $a - b = a + (-b)$ **Example** $14 - 8 = 14 + (-8)$

EXAMPLE 1 Subtract real numbers

Find the difference.

a. $-12 - 19 = -12 + (-19)$
 $= -31$

b. $18 - (-7) = 18 + 7$
 $= 25$

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GUIDED PRACTICE for Example 1

Find the difference.

1. $-2 - 7$

2. $11.7 - (-5)$

3. $\frac{1}{3} - \frac{1}{2}$

EXAMPLE 2 Evaluate a variable expression

Evaluate the expression $y - x + 6.8$ when $x = -2$ and $y = 7.2$.

$$y - x + 6.8 = 7.2 - (-2) + 6.8$$

Substitute -2 for x and 7.2 for y .

$$= 7.2 + 2 + 6.8$$

Add the opposite of -2 .

$$= 16$$

Add.