REASONING 2.3

DEVELOPING CONCEPTS

Addition of Integers

For use with Lesson 2.3

GOAL

Use reasoning to find a pattern for adding integers.

MATERIALS

- algebra tiles

Question

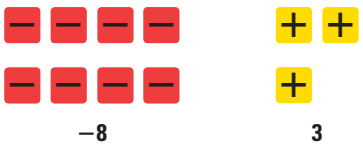
How can you model the addition of integers with algebra tiles?

Each + represents positive 1 and each − represents negative 1. Combining a + tile and a − tile equals zero.

Explore

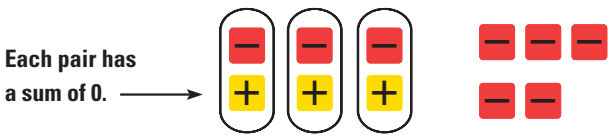
Use algebra tiles to find the sum of -8 and 3.

1 Model negative 8 and positive 3 using algebra tiles.



-8 3

2 Group pairs of positive and negative tiles. Count the remaining tiles.



3 The remaining tiles show the sum of -8 and 3. Complete: $-8 + 3 =$?.

Think About It

Use algebra tiles to find the sum of the numbers given.

1.

2 4

2.

-1 -5

3.

3 -3

Use algebra tiles to find the sum. Sketch your solution.

4. $3 + 3$ **5.** $-4 + (-2)$ **6.** $-3 + 2$ **7.** $5 + (-2)$

LOGICAL REASONING **Based on your results from Exercises 1–7, complete the statement with *always*, *sometimes*, or *never*.**

8. The sum of two positive integers is ? a positive integer.

9. The sum of two negative integers is ? a positive integer.

10. The sum of a positive integer and a negative integer is ? a negative integer.