▶ ACTIVITY 2.3

Developing Concepts

GROUP ACTIVITY
Work with a partner.

MATERIALS
algebra tiles

STUDENT HELP

↳ **Look Back**
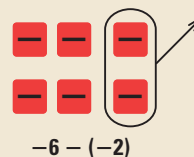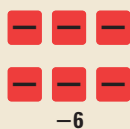For help with using algebra tiles, see p. 71.

Modeling Subtraction of Integers

▶ **QUESTION** **How can you model the subtraction of integers?**

▶ **EXPLORING THE CONCEPT: MODELING $-6 - (-2)$**

You can use algebra tiles to find differences.

1 Use algebra tiles to model -6.

-6

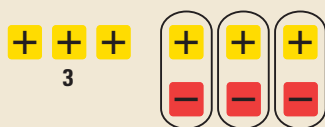**2** Subtract -2 by taking away two -1-tiles.

$-6 - (-2)$

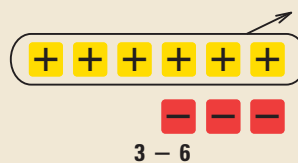**3** The remaining tiles show the difference of -6 and -2.

Complete the statement: $-6 - (-2) = \underline{\ ?\ }$.

▶ **EXPLORING THE CONCEPT: MODELING $3 - 6$**

4 Use algebra tiles to model 3.

Add 3 "zero pairs" so you can subtract 6.

5 Subtract 6 by taking away six 1-tiles.

$3 - 6$

6 The remaining tiles show the difference of 3 and 6.

Complete the statement: $3 - 6 = \underline{\ ?\ }$.

▶ **DRAWING CONCLUSIONS**

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

1. $7 - 2$ **2.** $-7 - (-3)$ **3.** $-5 - (-1)$

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

7. $3 - 5$ **8.** $5 - 8$ **9.** $0 - (-5)$

In Exercises 10 and 11, decide whether the statement is *true* or *false*. Use algebra tiles to show an example that supports your answer. Sketch your example.

10. To subtract a positive integer, add the opposite of the positive integer.

11. To subtract a negative integer, add the opposite of the negative integer.