NAME_____

Module 3 **Integers**
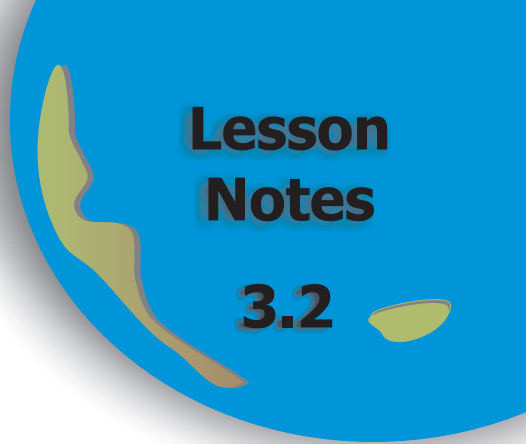**Lesson 2** **Adding Integers**

Lesson Objectives

- Model addition of integers using physical objects and pictures.
- Add integers.
- Find absolute value.

Subtopic 1   Adding Integers Using Counters Model

- Start with an empty field.

- **Negative** numbers are represented by red counters.

- Positive integers are represented by **yellow** counters.

- Place the appropriate counters in the empty field.

- A pair that has a total of **zero** is called a **zero** pair.

- The sum of a number and its opposite is **zero.**

- Make zero pairs and remove from the field.

- The counters remaining in the field is the **sum**.

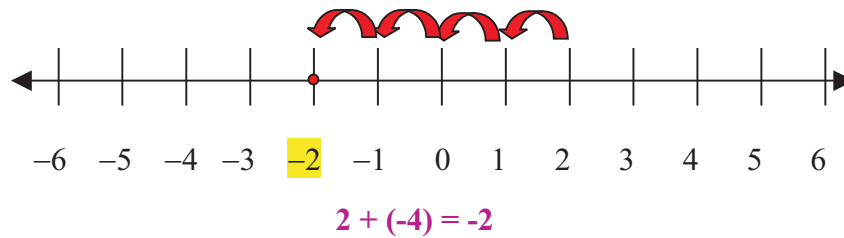**Add using counters.**

1   -3 + 1 **-2**

2   **-3 + (-4) -7**
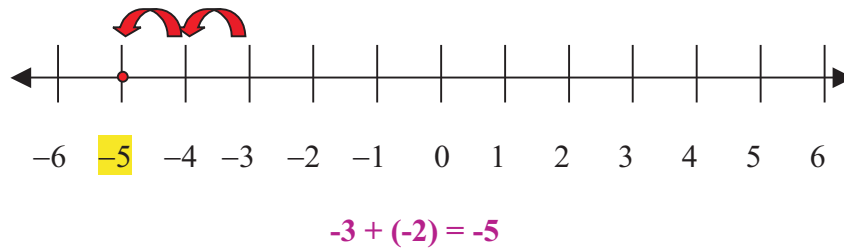
Adding Integers Using Number Lines

- Find the first addend on the number line.
- If adding a **positive** number, move to the right the number of spaces designated by the absolute value of the second addend.
- If adding a **negative** number, move to the left the number of spaces designated by the absolute value of the second addend.

Add using a number line.

3 $2 + (-4)$

$$2 + (-4) = -2$$

4 $-3 + (-2)$

$$-3 + (-2) = -5$$

Subtopic 3   **Adding Integers Using Rules**

- **Adding Integers with the Same Sign**
  Add the absolute values of the integers.
  The sum has the **same** sign as the addends.

- **Adding Integers with Different Signs**
  Subtract the lesser absolute value from the greater absolute value.
  The sum has the same sign as the integer with the **greater** absolute value.

Add.

5 $-11 + 31$
$|-11| = 11 < |31| = 31$
  $31 - 11 = 20$
$-11 + 31 = 20$

6 $-15 + (-21)$
$|-15| = 15$ $|-21| = 21$
  $15 + 21 = 36$
$-15 + (-21) = -36$