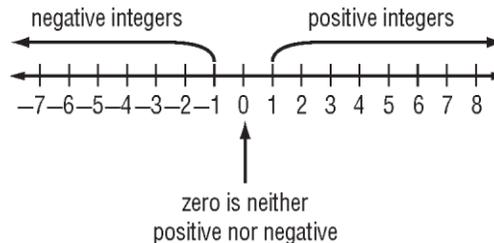


# Integers and Absolute Value

## Lesson 3-1

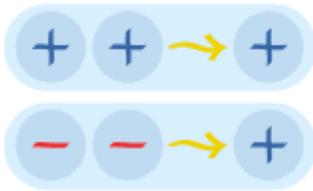
Integers less than zero are **negative integers**. Integers greater than zero are **positive integers**.



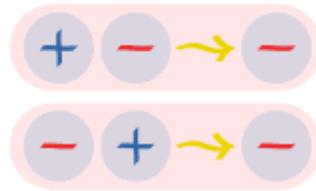
The **absolute value** of an integer is the *distance the number is from zero* on a number line. Two vertical bars are used to represent absolute value. The symbol for absolute value of 3 is  $|3|$ .

### Integer Sign Rules Reference

"Like Signs"



"Unlike Signs"



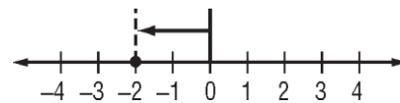
\*If 2 signs are next to each other with **NO** number in between, the signs **BATTLE!** Use the Sign Rules for a Reference.

Example 1)

a) Write an integer that represents 160 feet below sea level.

b) A profit of \$53

Example 2) Evaluate  $|-2|$ .



Example 3) Evaluate  $|-3| + |-4|$

Example 4) Graph the set of integers on a number line.  $\{-2, 0, 2\}$



**PRACTICE! Write an integer for each situation.**

1. seven degrees below zero

2. a loss of 3 pounds

3. a loss of 20 yards

4. a profit of \$25

5. 112°F above 0

6. 2,830 feet above sea level

**Graph each set of integers on a number line.**

7.  $\{-2, 0, 2\}$



8.  $\{1, 3, 5\}$



9.  $\{-2, -5, 3\}$



10.  $\{7, -1, 4\}$



**Evaluate each expression.**

11.  $|1|$

12.  $|-8|$

13.  $|0|$

14.  $|-82|$

15.  $|64|$

16.  $|-128|$

17.  $|-22| + 5$

18.  $|-40| - 8$

19.  $|-18| + |10|$

20.  $|-7| + |-1|$

21.  $|98| - |-5|$

22.  $|-49| - |-10|$