

## Chapter 2-1 Notes: Integers and Absolute Value

Integers: the set of all positive and negative whole numbers including zero.

Absolute Value of a Number: the distance a number is from zero; always a positive value; symbol is two lines with number in between.

Write an integer for each situation. Then identify its opposite and describe what it means.

1) 32 feet underground

-32 ; 32 ; 32 feet above ground

2) 8 weeks after winning

8 ; -8 ; 8 weeks before winning

3) a withdrawal of \$25

-25 ; 25 ; a deposit of \$25

Write two inequalities using the number pairs. Use the symbols  $<$  or  $>$ .

4) -4 and -8

$$-4 > -8$$

$$-8 < -4$$

5) -12 and 1

$$-12 < 1$$

$$1 > -12$$

Replace  $\square$  with  $<$ ,  $>$ , or  $=$ .

6)  $-5 \square 5$

7)  $0 \square -10$

Evaluate

$$8) |18| - |-5|$$

$$18 - 5 = 13$$

$$9) |3| + |-14|$$

$$3 + 14 = 17$$

Evaluate if  $x = 7$  and  $y = -6$ .

$$10) 15 - |y|$$

$$15 - |-6|$$

$$15 - 6$$

$$9$$

$$11) 3|y| + x$$

$$3|-6| + 7$$

$$3 \cdot 6 + 7$$

$$18 + 7 = 25$$