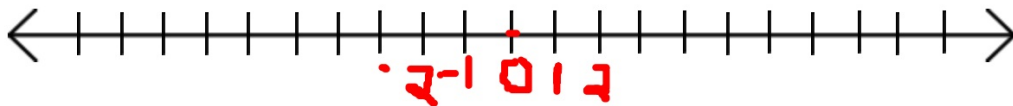


Integers 11-1

Integers: A set of whole numbers and their opposites. (Include 0)

Opposites: On a number line, opposites are the same distance from 0, but on different sides of 0. Zero is its own opposite. An opposite can be a positive or negative number.



Positive numbers: Greater than 0. They may be written with a (+), but are usually written without it.

Highest temp: +134 F or 134 F

Negative numbers: Less than zero. Always written with a negative sign (-).

Lowest temperature: - 80 F

Integers in the Real World

- a.) A gain of 20 yards in football.
Positive numbers can represent gains or increases. 20
- b.) Spending \$75
Negative numbers can represent losses or decreases. -75
- c.) 10 feet below sea level.
Negative numbers can represent values below or less than a certain value.

-10

Absolute Value: the distance a number is from zero.

|4| | -4|

* The only time will have a negative is when the neg. sign is outside.

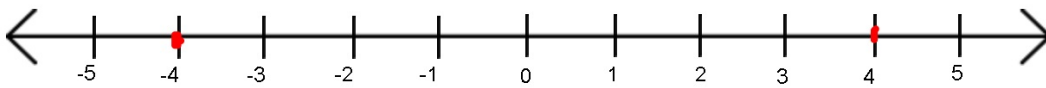
$$|4| = 4$$

$$|-4| = 4$$

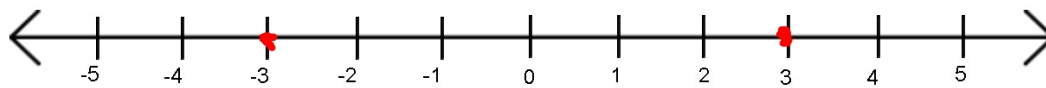
Graphing Integers

Graph each integer and its opposite on a number line.

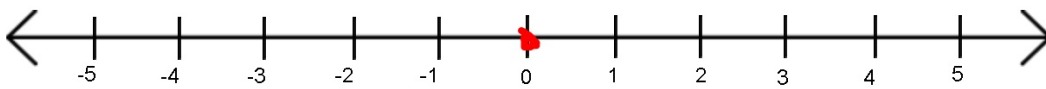
a.) -4



b.) 3



c.) 0



Writing Integer Expressions to Represent Situations:

Steffe works on the ground floor of a museum restoring ancient vases. using the elevator, she goes down 2 floors to get a broken vase, then goes up 6 floors to talk to an ancient civilization expert, and then goes down 3 floors to meet a museum guide. Use integers to model this situation.

$$-2 + 6 - 3$$