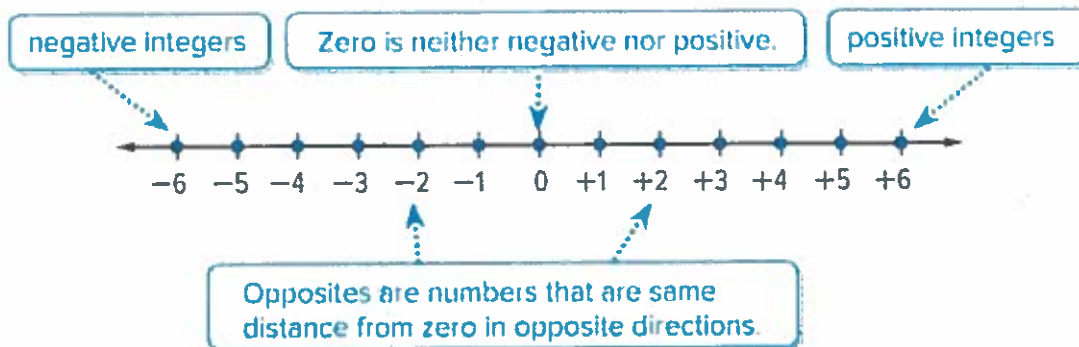


# 5-1 Integers and Graphing & 5-3 Compare and Order Integers

**Integers:** Positive whole numbers, their opposites, and zero.

**Negative Integers:** less than 0

**Positive Integers:** more than 0



**Examples:** Write an integer and then explain the meaning of zero in each situation.

12 Feet below sea level: -12; 0 represents sea level

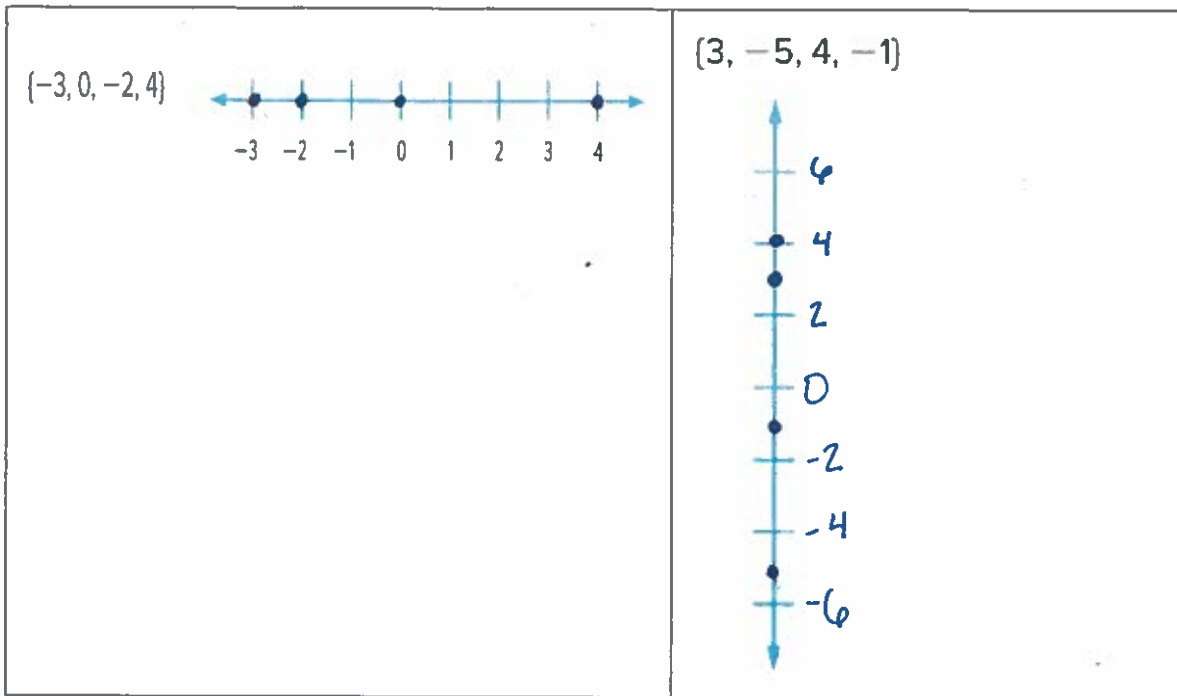
Winning 3 tokens in a game: 3; 0 represents no tokens

The price of a stock dropping \$2: -\$2; 0 represents no stock change

## Graph Integers

Integers and sets of integers can be graphed on a horizontal or vertical number line. To graph a point on the number line, draw a point on the number line at its location. A set of integers is written using braces, such as  $\{2, -9, 0\}$ .

**EXAMPLES:** Graph each integer on the number line.



To compare integers, you can compare the signs as well as the magnitude, or size, of the numbers. Greater numbers are graphed farther to the right.

**Compare the signs.**



Positive numbers are greater than negative numbers.  
So,  $2 > -3$ .

**Compare the position on the number line.**



Since  $-2$  is farther to the right,  $-2 > -3$ .

$-6 < 3$	<p><del><math>(-55, 143, 18, -79, 44, 101)</math></del> Greatest <math>\rightarrow</math> Least  <math>143, 101, 44, 18, -55, -79</math></p>
$-3 < 2$	<p><del><math>(-221, 63, 54, -89, -71, -10)</math></del> Least <math>\rightarrow</math> Greatest  <math>-221, -89, -71, -10, 54, 63</math></p>