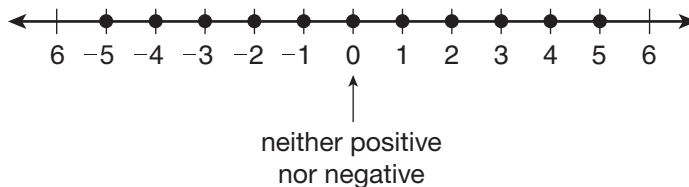


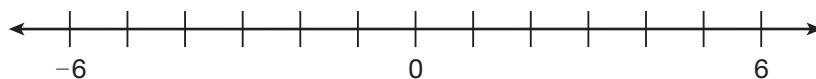
Lesson 1: Integers

Integers are whole numbers and their opposites (positive numbers and negative numbers) and zero. **Negative numbers** are the numbers less than zero. All of these types of numbers can be shown on a number line.



Example

Write the numbers 2, 5, -4 , and -1 in their correct place on the number line.



Determine what each mark on the number line represents. On the number line above, each mark represents 1 unit.

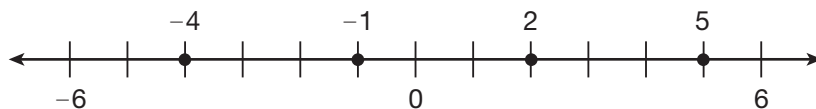
The number 2 is a positive integer. It is located 2 units to the right of zero.

The number 5 is a positive integer. It is located 5 units to the right of zero.

The number -4 is a negative integer. It is located 4 units to the left of zero.

The number -1 is a negative integer. It is located 1 unit to the left of zero.

Locate the numbers on the number line.



The **opposite** of a number is the number that is the same distance from 0 on a number line, but on the opposite side of 0. The opposite of a positive number is a negative number, and the opposite of a negative number is a positive number. For example, 4 and -4 are opposites.

TIP: Zero is its own opposite.

Integers can be used to represent real-world situations. Some keywords that indicate positive integers are *gained*, *increased*, *rose*, *above*, *more*, and *up*. Some keywords that indicate negative integers are *lost*, *decreased*, *dropped*, *below*, *less*, and *down*.

 **Example**

What integer is represented by the **bold words** in the following sentence?

The lowest temperature ever recorded in the United States was **80 degrees Fahrenheit below 0**.

The integer that represents **80 degrees Fahrenheit below 0** is **-80**.

 **Example**

A baby boy typically experiences a **growth of 10 inches** during his first year of life. Explain what the 0 means in the situation.

The integer that represents a **growth of 10 inches** is **10**. In this situation, the 0 represents the height of the baby boy at birth.

 **Example**

What integer is represented by the **bold words** in the following sentence? Explain what the 0 means in the situation.

A scuba diver dives **30 meters below the ocean's surface**.

The integer that represents **30 meters below the ocean's surface** is **-30**. In this situation, the 0 represents the surface of the ocean.