



## INTEGERS

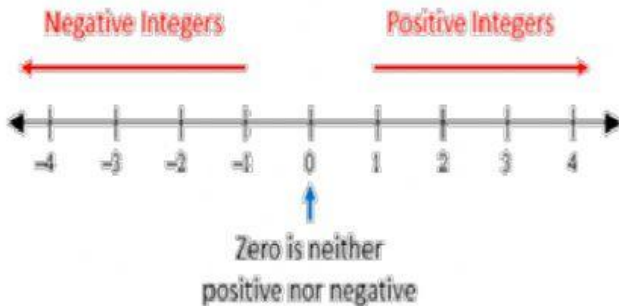
**What are integers?**

**Whole numbers are the numbers starting from 0 that do not include fractions or decimals.**

But what happens when we want to refer to whole numbers that are less than zero? **They are referred to as Integers.**

Integers are the set of numbers that include all whole numbers, zero and their opposites.

### Integer Number Line

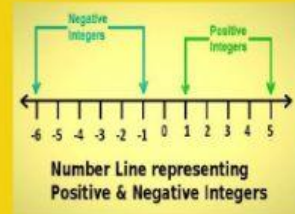


## What is an Integer?

Integers are a set of numbers that

includes :

- Whole Numbers
- Positive Numbers
- Negative Numbers



### Positive Integers

- ✦ Whole numbers greater than 0 are called positive integers. **DO NOT INCLUDE 0.**
- ✦ They are sometimes written with a **positive sign (+)**.
- ✦ If a number has no sign, it is always positive.

List the positive integers between 10 and 20:

### Negative Integers

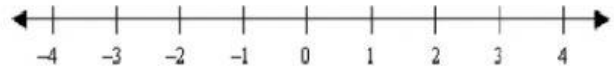
- ✦ Whole numbers less than 0 are called negative integers. **DO NOT INCLUDE 0.**
- ✦ Negative numbers are always written with a **negative sign (-)** to show that they are negative.

Circle all the negative integers:

13, -8, -22, 0, 4, 5, -9, -3245, 13

### More Facts about Integers

The set of negative and positive integers (with 0) can be shown on a number line as follows:



NOTE: Each positive number has an opposite negative number.

### Increase and Decrease

You already know that positive numbers increase (get bigger) as you move to the right along the line and they decrease (get smaller) as you move to the left along the line.

As you move left of 0, the numbers get smaller and smaller.



-1 means **1 less than 0**

-2 means **2 less than 0** and so on

What does -18 mean?

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You can use a number line to help you sort integers in order of size.

Name: \_\_\_\_\_  
Date: \_\_\_\_\_

### Positive and Negative Integers

Check vocabulary and concepts.

**Section A:** Use the words in the box to complete each sentence. (1 point each)

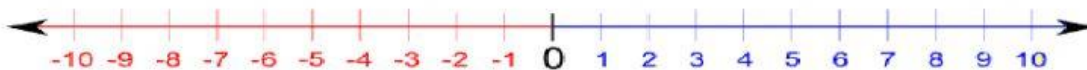
**Negative**  
**Positive**  
**Zero**

1. The integer \_\_\_\_\_ is neither negative nor positive.
2. Whole numbers greater than 0 are called \_\_\_\_\_ integers.
3. Whole numbers less than 0 are called \_\_\_\_\_ integers.

**Section B:** Write down the opposite of each integer. (1 point each)

1. 2 \_\_\_\_\_
5. -8 \_\_\_\_\_
6. 0 \_\_\_\_\_
7. -50 \_\_\_\_\_

**Section C:** Use this number line to help you with question 8. (1 point each)



8. Which is smaller in each pair?

- a. 2 or -2 \_\_\_\_\_
- b. -10 or 3 \_\_\_\_\_
- c. -9 or -1 \_\_\_\_\_

9. **Section D:** Represent the following integers:

### Representation Integers

- a. The temperature fell 49 degrees overnight.  
\_\_\_\_\_
- b. There are 38 pine trees currently in the park.  
\_\_\_\_\_
- c. Sam found 10 seashells on the beach during his vacation  
\_\_\_\_\_

