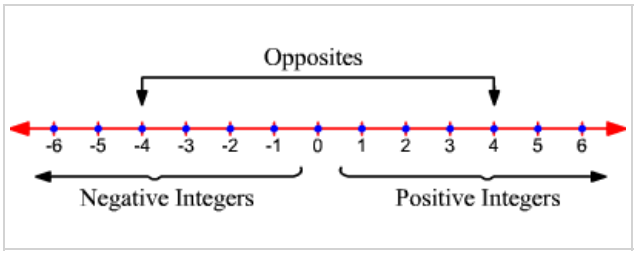
Integers

Whole numbers are represented on the number line as shown here:



If you move towards the right from the zero mark on the number line, the value of the numbers increases. If you move towards the left from the zero mark on thenumber line, the value of the numbers decreases.

The collection of the numbers, that is, ... -3, -2, -1, 0, 1, 2, 3, ..., is called integers. When we need to use numbers with a negative sign, we need to go to the left of zero on the number line. These numbers are called negative numbers.
Examples where these negative numbers are used are temperature scale, water level in a lake or river, level of oil tank, debit account and outstanding dues.
The numbers -1, -2, -3, -4... which are called negative numbers, are also called negative integers.
The number 1, 2, 3, 4 ...s, which are called positive numbers, are also called positive integers.
If we stand at the zero mark on the number line, we can either go left towards negative integers or right towards positive integers. When we move left towards zero on the number line, the value of positive integers decreases. When we move left further away from zero on the number line, the value of negative integers decreases.

Addition of integers:

- When two positive integers are added, then we get an integer with a positive sign.

Example: (+8) + (+6)= + 14

- When two negative integers are added, then we get an integer with a negative sign.

Example: (-3) + (-5) = -8

- When a positive integer is added to a negative integer, then we subtract them and put the sign of the greater integer. The greater integer can be decided by ignoring the signs of the integers. Example: (+4) + (-9) = -5; (+8) + (-3) = 5

Subtraction of integers:

- When we subtract a larger positive integer from a smaller positive integer, the difference is a negative integer.

Eg: (+5)-(+8) = -3

- To subtract a negative integer from any given integer, we just add the additive inverse of the negative integer to the given integer.

Eg: (-5)-(-8) = +3

Thus, the subtraction of an integer is the same as the addition of its additive inverse. Both addition and subtraction of integers can be shown on a number line.