## B BYJU'S

## Grade 06 Maths Chapter Notes



# BBYJU'S Classes 

## Chapter Notes

## Integers

## Grade 06

## Topics to be Covered

## 1. Introduction

1.1. Natural Numbers
1.2. Whole Numbers
1.3. Negative Numbers
1.4. Integers
1.5. Number Family

## 3. Addition of Integers

3.1. Addition of Integers of Same Sign
3.2. Addition of Integers of

Same Sign on Number Line
3.3. Addition of Integers of

Different Sign
3.4. Addition of Integers of

Different Sign on Number Line
3.5. Additive Inverse

Same Sign on Number Line
4.3. Subtraction of Integers of

Different sign
4.2. Subtraction of Integers of Different Sign on Number Line

## Mind Map



## 1. Introduction

### 1.1. Natural Numbers

Natural numbers are counting numbers. They are the set of numbers that include all the positive integers from 1 to infinity.

Natural Numbers are 1, 2, 3, 4, ...

### 1.2. Whole Number

Whole number are the set of numbers that include zero and natural numbers.

Whole numbers are $0,1,2,3,4, \ldots$

### 1.3. Negative Number

Negative numbers are the numbers which are less than zero. They have minus (-) sign before them.

Negative numbers are $-1,-2,-3,-4, \ldots$

### 1.4. Integers

Integers are the set of numbers that include whole numbers and negative numbers.

$$
\text { Integers are } \ldots,-3,-2,-1,0,1,2,3, \ldots
$$

## 1. Introduction

### 1.5. Number Family



- The family of whole numbers and the negative numbers together form the family of integers.


## 2. Number Line

### 2.1. Representation of Integers on Number Line



The value of integers increases from left to right
The value of integers decreases from right to left

## Successor \& Predecessor

The successor of a number comes just after it. The predecessor of a number comes just before it.


## 2. Number Line

### 2.2. Significance of Negative Numbers

They are mainly used to symbolize two opposite situations.

- In situations where keywords like increase, above sea level, profit, etc. are mentioned, we use positive integers.
- In situations where like decrease, below sea level, loss, etc. are mentioned, we use negative integers.


28,169 feet above sea level can be represented by $+28,169$.
8 feet below sea level can be represented by -8 .

The lowest temperature recorded in the world is $-89.2^{\circ} \mathrm{C}$, in Antarctica.

## 3. Addition of Integers

### 3.1. Addition of Integers of Same Sign

Positive Integers
Addition of positive integers is same as addition of natural numbers.

$$
+5-2=
$$

Negative Integers

Neglect the sign and add the numbers. Give the negative sign to the result.

$$
-5+-2=-7
$$

3.2. Addition of Integers of Same Sign on Number Line


$$
5+2=7
$$



$$
-5+-2=-7
$$

## 3. Addition of Integers

### 3.3. Addition of Integers of Different Sign

Subtract the absolute value of smaller number from that of bigger number and retain the sign of the bigger number

$$
\begin{aligned}
& -7+3=-4 \\
& 7+-3=4
\end{aligned}
$$

3.4. Addition of Integers of Different Sign on Number Line



$$
7+-3=4
$$

## 3. Addition of Integers

### 3.5. Additive Inverse

Additive inverse of an integer is obtained by changing the sign of the integer.


Additive inverses are at equal distance from zero on the number line.

## 4. Subtraction of Integers

### 4.1. Subtraction of Integers of Same Sign

If both the integers are negative, add the additive inverse of the integer that is being subtracted, to the other integer. Give negative sign to the result.

$$
-3--1=-2
$$

If both the integers are positive, subtract them and give positive sign to the result.

$$
3-1=2
$$

### 4.2. Subtraction of Integers of

 Same Sign on Number Line

$$
-3-1-2
$$


$3-1=2$

## 4. Subtraction of Integers

### 4.3. Subtraction of Integers of Different Sign

Add the absolute value of integers and give sign of the bigger number to the result.

$$
\begin{aligned}
& -5-2=2=-7 \\
& 5 \\
& -\quad-2
\end{aligned}
$$



