Short Notes for Fractions

What is Fraction

A fraction is a number representing a part of a whole. The whole may be a single object or a group of objects.

Example 3/11

3 out of 11 parts

3 -> Called Numerator

11 -> Called Denominator

What is proper Fraction

Proper Fraction is the fraction which is less than 1 or where Numerator is less than Denominator

What is Mixed Fraction

It is combination of whole number and proper fraction

$$8\frac{4}{9}$$

What is Improper Fraction

Improper Fraction is the fraction which is greater than 1 or where Numerator is greater than Denominator

Example 11/5

How to convert Mixed Fractions to Improper Fractions?

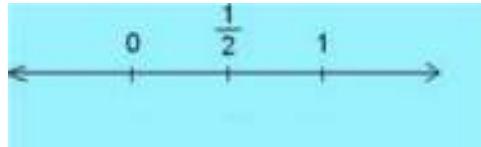| Step1	Obtain the mixed fraction. Let the mixed fraction be $5\frac{2}{6}$
Step 2	Identify the whole number and the numerator (top) and denominator (bottom) of the proper fraction. Whole Number=5 Numerator=2 Denominator=6
Step 3	Apply the formula $$\frac{(\text{whole X denominator}) + \text{Numerator}}{\text{Denominator}}$$ $5\frac{2}{6}$ =32/6

How to convert Mixed Fractions to Improper Fraction

Step 1	Obtain the improper fraction.
Step 2	Divide the numerator by the denominator and obtain the quotient and remainder.
Step 3	Write the mixed fraction as Quotient (Reminder/ denominator)

How to Represent Fraction on Number Line?

We can show fractions on a number line. In order to represent 1/2 on the number line, draw the number line and look for the portion between 0 and 1

Now, divide the gap between 0 and 1 into two equal parts. The point of division represents 1/2.

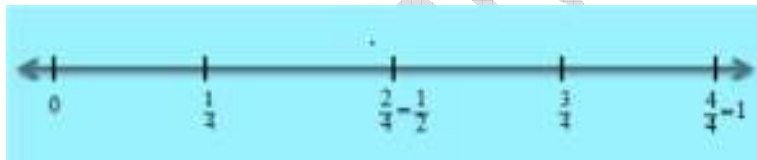To represent 1/4 on a number line, we divide the gap between 0 and 1 into 4 equal parts

First point will represent ½

Second point will represent 2/4 =1/2

Third point will represent 3/4

More points about Fraction

1) If the numerator and the denominator of a fraction have no common factor except, then it is said to be in its simplest form or lowest form.

2) Equivalent fractions are fractions that have the same value in its simplest form.

3) The equivalent fraction of a given fraction is obtained by multiplying both the numerator and the denominator of the given fraction by the same number.

Comparison, Addition and subtraction of Fraction

Important definition

Like Fractions	Fractions with the same

	denominators are called like fractions.
Unlike Fraction	Fractions with different denominators are called unlike fractions.

Comparison, addition and subtraction of Like Fraction

Comparison: The numerator value decides the larger value.

$$\frac{5}{6} \boxed{>} \frac{2}{6};$$

$$\frac{3}{6} \boxed{>} 0;$$

$$\frac{1}{6} \boxed{<} \frac{6}{6};$$

$$\frac{8}{6} \boxed{>} \frac{5}{6}$$

Addition: The numerator adds to provide the final fraction value.

$$\frac{1}{5} + \frac{1}{5} = \frac{2}{5}$$

Subtraction: The Numerator subtract to provide the final fraction value.

$$\frac{4}{5} - \frac{1}{5} = \frac{3}{5}$$

Comparison, addition and subtraction of Unlike Fraction

First we need to convert the unlike fraction to like fraction using the LCM of the denominators

And then it works like like Fraction

Comparison, Addition and Subtraction of Mixed Fraction

Two mixed fraction can be added or subtracted by adding or subtracting the whole number of the two fractions and then adding or subtracting the fractional parts together.

Two mixed fractions can also be converted into improper fractions and then added or subtracted.