ADDITION AND SUBTRACTION OF FRACTIONS

Tuesday, 24th May, 2016

Objectives

- Addition and subtraction of fractions

Introduction

Fractions are parts of a whole number. They are written like this: $\frac{x}{y}$ in mathematics; where x is the numerator and y is the denominator. Their arithmetic is very much different from those of whole numbers.

Addition and Subtraction of Fractions

If you are given two fractions to add up or to subtract one from the other. You would need to first find the Lowest Common Multiple (LCM) of the denominators of the several fractions. Thereafter, you should write down the LCM and draw a line over it.

The LCM is now used to multiply the numerator of each of the fractions and the denominator of each of the fractions would be used to divide their product. The answers of the operation are written down above the LCM and then addition or subtraction operation is carried out is the case may be.

Examples

1. Simplify $\frac{1}{2} + \frac{4}{5}$

Solving

At first, we find the LCM of the denominators of the involved fraction: 2 and 5

2	2	5
5	1	5
	1	1

LCM = 2 x 5 = 10

$=\frac{1}{2}+\frac{4}{5}=\frac{5+8}{10}=\frac{13}{10}$

$\therefore \frac{1}{2}$ plus $\frac{4}{5}$ equals $\frac{13}{10}$

2. Simplify $\frac{3}{4}-\frac{1}{2}$

Solving

At first, we find the LCM of the denominators of the involved fraction: 4 and 2

2	2	4
2	1	2
	1	1

LCM = 2 x 2 = 4

$=\frac{3}{4}-\frac{1}{2}=\frac{3-2}{4}=\frac{1}{4}$

$\therefore \frac{3}{4}$ minus $\frac{1}{2}$ equals $\frac{1}{4}$