

**Addition and subtraction of Fractions**

Addition of Like Fractions

Since like fractions have the same denominator, we retain the denominator in the final answer.

We add the numerator to get the numerator of the final fraction.

Subtraction of Like Fractions

Since like fractions have common denominator, we retain the denominator in the denominator.

The numerators are subtracted to get the numerator of the final fraction.

Addition of Unlike Fractions

These fractions have different denominators.

Firstly, the fractions are converted into equivalent fractions with a common denominator.

To do so, the LCM of denominators is calculated.

The fractions are converted into like fractions with a common denominator.

The common denominator is retained

The numerators are added.

Subtraction of Unlike Fractions

These fractions have different denominators.

Firstly, the fractions are converted into equivalent fractions with a common denominator.

To do so, the LCM of denominators is calculated.

The fractions are converted into like fractions with a common denominator.

The common denominator is retained

The numerators are subtracted.

**Problem:**Solve 9/11 -2/15

These fractions have different denominators.

Firstly, the fractions are converted into equivalent fractions with a common denominator.

To do so, the LCM of denominators is calculated. The LCM of 11 and 15 is 165.

So, the fractions are :

   = 9\*15/11\*15 and  2\*11/15\*11

   = 135/165 and 22/165

Subtracting the numerators we get :

= 135-22/165

= 113/165

So, the answer is 113/165.

(b)****

Firstly, the mixed fractions are converted into improper fractions.We get:

= 2\*8+1/2 and 8\*3+5/8

= 17/2 and 29/8

Now we convert these fractions into like fractions by taking a common denominator.the LCM of 2 and 8 is 8. So we  get:

= 17\*4/2\*4 and 29/8

= 68/8 and 29/8

We retain the common denominator and subtract the numerators.

= 68-29/8

=39/8

Problem: Ritu ate 3/5 part of an apple and the remaining apple was eaten by her brother Somu. How much part of the apple did Somu eat? Who had the larger share? By how much?



Fraction of apple eaten by Ritu =3/5

Fraction of apple eaten by Somu = Total apple – Fraction of apple eaten by Ritu

Fraction of apple eaten by Somu = 1-3/5

Fraction of apple eaten by Somu = 2/5

To know who ate a larger share of the apple, we will compare the fractions that represent the share of Ritu and Somu respectively:

Share of Ritu and Share of  Somu

= 3/5 and 2/5

Since the fractions are like fractions, we will simply the compare the numerators. So, we get:

=3 > 2

=3/5 >  2/5

= Fraction of Apple eaten by Ritu > Share of Apple eaten by Somu.

The quantity by which Ritu’s share is greater than Somu :

= Ritu’s share of apple – Somu’s share of Apple

=3/5 – 2/5

Since these fractions are like fractions, we will retain the common denominator and subtract the numerators.

= (3-2)/5

= 1/5