Add and Subtract Fractions

1. Adding like fractions

In case of like fractions, the denominator is same so we can add them easily.

Steps to add like fractions-

a. Add the numerators.

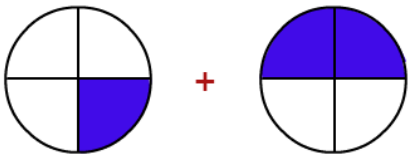
b. Leave the common denominator same. (Don't add the denominator).

c. Write the answer as

$$\frac{\text{Numerator 1} + \text{Numerator 2}}{\text{Common Denominator}}$$

Example

Add $\frac{1}{4} + \frac{2}{4}$.



$\frac{1}{4}$ + $\frac{2}{4}$

Solution

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

2. Subtracting like fractions

Steps to subtract the like fractions-

a. Subtract the small numerator from the bigger one.

b. Leave the common denominator same.

c. Write the answer as

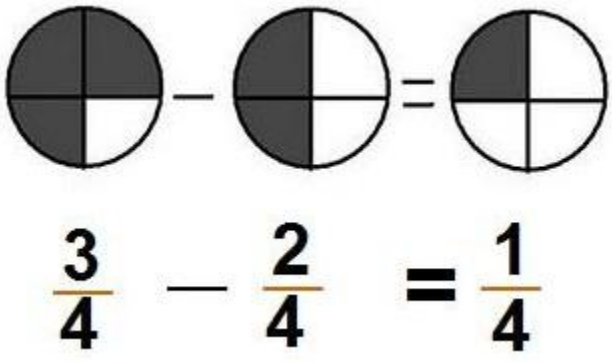
$$\frac{\text{Big numerator} - \text{small numerator}}{\text{common denominator}}$$

Example

Subtract $\frac{2}{4}$ from $\frac{3}{4}$.

Solution

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



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

3. Adding unlike fraction

If we have to add the unlike fractions, first we have to find the equivalent fraction of the given fractions with the same denominator then add them.

Steps to add unlike fractions-

a. Take the LCM of the denominator of the given fractions.

b. Find the equivalent fractions of both fractions with LCM as the denominator.

c. Add them as the like fractions.

Example

Find $\frac{4}{5}+\frac{3}{8}$.

Solution

Take the LCM of 5 and 8, which is 40.

$$\frac{4}{5}\times\frac{8}{8}=\frac{32}{40}$$

$$\frac{3}{8}\times\frac{5}{5}=\frac{15}{40}$$

$$\frac{32}{40}+\frac{15}{40}=\frac{47}{40}=1\frac{7}{40}$$

4. Subtracting unlike fractions

Steps to subtract unlike fractions-

a. Take the LCM of the denominator of the given fractions.

b. Find the equivalent fractions of both fractions with LCM as the denominator.

c. Subtract them as the like fractions.

Example

$\text{Find} \frac{3}{4} - \frac{1}{5}.$

Solution

LCM of 4 and 5 is 20.

$\frac{3}{4} \times \frac{5}{5} = \frac{15}{20}$

$\frac{1}{5} \times \frac{4}{4} = \frac{4}{20}$

$\frac{15}{20} - \frac{4}{20} = \frac{11}{20}$