

Step 1: Understand Fractions

A fraction has two parts: the **numerator** (the top number) and the **denominator** (the bottom number). The numerator represents how many parts you have, and the denominator represents how many parts make a whole.

Step 2: Check the Denominators

When adding fractions, the first thing to check is if the denominators (the bottom numbers) are the same.

Example 1: Same Denominator

If you want to add $\frac{1}{4} + \frac{2}{4}$, both fractions have the same denominator (4). Just add the numerators:

- $1 + 2 = 3$

So, $\frac{1}{4} + \frac{2}{4} = \frac{3}{4}$.

Step 3: Finding a Common Denominator

Now, let's say the denominators are different, like $\frac{1}{3} + \frac{1}{6}$. You need to find a common denominator. The **least common denominator (LCD)** is the smallest number that is a multiple of both denominators (3 and 6).

Step 4: Convert the Fractions

The LCD of 3 and 6 is 6.

Now, convert $\frac{1}{3}$ to have a denominator of 6:

- To change $\frac{1}{3}$, multiply both the numerator and denominator by 2: $1 \times 2 = 2$ and $3 \times 2 = 6$. So, $\frac{1}{3} = \frac{2}{6}$.

Your fractions are now $\frac{2}{6} + \frac{1}{6}$.

Step 5: Add the Fractions

Now that both fractions have the same denominator, simply add the numerators:

- $2 + 1 = 3$

So, $\frac{1}{3} + \frac{1}{6} = \frac{3}{6}$.

Step 6: Simplify the Fraction

You might need to simplify the fraction if possible. The fraction $\frac{3}{6}$ can be simplified:

- Both 3 and 6 can be divided by 3: $3 \div 3 = 1$ and $6 \div 3 = 2$.

That gives you $\frac{1}{2}$.

Final Tips

1. Always make sure your fractions have the same denominator before adding them.
2. If needed, simplify your answer at the end!