

Addition and Subtraction of Fractions

Step 1: If either fraction is mixed, then convert to improper.

Process of converting Mixed to Improper

Multiply the denominator (bottom of the fraction) by the whole number and then add the numerator. This number is your new numerator (top heavy) and you keep the original denominator.

Step 2: Multiply the two denominators. (Straight across the bottom)

Step 3: Cross multiply from the bottom up, to generate new numerators.

Step 4: Add or Subtract (combine) the new numerators.

Step 5: Reduce the fraction to simplest terms. (Remove all common factors)

Note: This is called the “Algebraic Algorithm” for adding or subtracting fractions with unlike denominators.

Multiplication of Fractions

Step 1: If either fraction is mixed, then convert to improper.

Step 2: Multiply straight across. (Numerator times numerator, denominator times denominator)

Step 3: Reduce the fraction to simplest terms. (Remove all common factors)

Division of Fractions

Step 1: If either fraction is mixed, then convert to improper.

Step 2: Rewrite the first fraction. (Drop)

Step 3: Change the operation sign from division to multiplication (change)

Step 4: Reciprocate the second fraction (flip-turn it over)

Step 5: Multiply the fractions together.

Step 6: Reduce the fraction to simplest terms. (Remove all common factors)