

Fraction Rules Cheat Sheet

Add, subtract, multiply, divide, simplify and convert mixed numbers

Add and subtract

Find a common denominator (the least common multiple of the denominators), rewrite each fraction, then add or subtract the numerators. Keep the denominator. Example: $\frac{3}{4} + \frac{2}{3} = \frac{9}{12} + \frac{8}{12} = \frac{17}{12} = 1 \frac{5}{12}$.

Multiply

Multiply the numerators, multiply the denominators, then simplify. Example: $\frac{2}{5} \times \frac{3}{4} = \frac{6}{20} = \frac{3}{10}$.

Divide: keep, change, flip

Keep the first fraction, change divide to multiply, flip the second fraction. Example: $\frac{3}{4} \div \frac{2}{3} = \frac{3}{4} \times \frac{3}{2} = \frac{9}{8} = 1 \frac{1}{8}$.

Simplify

Divide the numerator and denominator by their greatest common factor. Example: divide both parts of $\frac{18}{24}$ by 6 to get $\frac{3}{4}$.

Mixed numbers and improper fractions

Mixed to improper: whole $\times$ denominator + numerator, over the denominator ($2 \frac{1}{3} = \frac{7}{3}$).

Improper to mixed: divide, the remainder is the new numerator ($\frac{17}{5} = 3 \frac{2}{5}$).

Fraction	Simplest form	Decimal
6/8	$\frac{3}{4}$	0.75
10/15	$\frac{2}{3}$	0.667
12/16	$\frac{3}{4}$	0.75
9/12	$\frac{3}{4}$	0.75
14/21	$\frac{2}{3}$	0.667
15/20	$\frac{3}{4}$	0.75