

Fraction Tricks & Shortcuts

12 simple strategies to make fractions easier to understand, compare and calculate.

Trick 1: Find Equivalent Fractions

Multiply or divide the numerator and denominator by the same non-zero number.

Example: $2/3 = 4/6 = 6/9$.

Trick 2: Simplify Fractions

Divide the numerator and denominator by their greatest common factor.

Example: $12/18 \div 6 = 2/3$.

Trick 3: Compare Fractions with the Same Denominator

The fraction with the larger numerator is greater.

Example: $5/8 > 3/8$.

Trick 4: Compare Fractions with the Same Numerator

The fraction with the smaller denominator is greater.

Example: $3/4 > 3/7$ is false; actually $3/7 < 3/4$ because fourths are larger pieces.

Trick 5: Find a Fraction of a Number

Divide by the denominator first, then multiply by the numerator.

Example: $3/5$ of 40 $\rightarrow 40 \div 5 = 8$; $8 \times 3 = 24$.

Trick 6: Add Fractions with the Same Denominator

Add the numerators and keep the denominator unchanged.

Example: $3/7 + 2/7 = 5/7$.

Trick 7: Subtract Fractions with the Same Denominator

Subtract the numerators and keep the denominator unchanged.

Example: $6/9 - 2/9 = 4/9$.

Trick 8: Find a Common Denominator

For different denominators, rewrite the fractions using a common denominator before adding or subtracting.

Example: $1/2 + 1/4 = 2/4 + 1/4 = 3/4$.

Trick 9: Multiply Fractions

Multiply the numerators together and the denominators together. Simplify when possible.

Example: $2/3 \times 3/5 = 6/15 = 2/5$.

Trick 10: Divide Fractions

Keep the first fraction, change division to multiplication, and flip the second fraction.

Example: $2/3 \div 4/5 = 2/3 \times 5/4 = 10/12 = 5/6$.

Trick 11: Convert a Mixed Number to an Improper Fraction

Multiply the whole number by the denominator, add the numerator, and keep the denominator.

Example: $2 \frac{1}{3} = (2 \times 3 + 1)/3 = 7/3$.

Trick 12: Fraction, Decimal and Percentage Links

Remember common equivalents to move quickly between forms.

Example: $1/2 = 0.5 = 50\%$; $1/4 = 0.25 = 25\%$; $3/4 = 0.75 = 75\%$.

Try It Yourself!

Try to solve these mentally before writing the working.

1. Simplify $\frac{8}{12} =$ _____

2. Which is greater: $\frac{5}{8}$ or $\frac{3}{8}$? _____

3. $\frac{2}{5}$ of 30 = _____

4. $\frac{3}{7} + \frac{2}{7} =$ _____

5. $\frac{6}{9} - \frac{2}{9} =$ _____

6. $\frac{1}{2} + \frac{1}{4} =$ _____

7. $\frac{2}{3} \times \frac{3}{5} =$ _____

8. $\frac{2}{3} \div \frac{4}{5} =$ _____

9. Convert $2\frac{1}{3}$ to an improper fraction. _____

10. $\frac{3}{4}$ as a percentage = _____

Answer Key

1. $\frac{2}{3}$ | 2. $\frac{5}{8}$ | 3. 12 | 4. $\frac{5}{7}$ | 5. $\frac{4}{9}$
6. $\frac{3}{4}$ | 7. $\frac{2}{5}$ | 8. $\frac{5}{6}$ | 9. $\frac{7}{3}$ | 10. 75%