

Adding and Subtracting Fractions With Unlike Denominators

You can add and subtract fractions with unlike denominators. Start by making equivalent fractions using the least common denominator, and then add or subtract the fractions. Let's try it! Solve $\frac{1}{2} - \frac{2}{5}$.

First, find the least common denominator. The least common denominator (LCD) is the smallest common multiple of both denominators. For this problem, the LCD is 10. Now multiply to make equivalent fractions with a denominator of 10.

$$\frac{1 \times 5}{2 \times 5} = \frac{5}{10} \quad \frac{2 \times 2}{5 \times 2} = \frac{4}{10}$$

Next, subtract the fractions. Subtract the numerators and keep the denominators the same. Make sure your answer is in simplest form.

$$\frac{5}{10} - \frac{4}{10} = \frac{1}{10}$$



If this were an addition problem, you would follow the same steps, except you would add the numerators instead of subtracting them.

Try it yourself! Add or subtract. Show your work and write your final answer in simplest form.

$\frac{1}{2} + \frac{1}{3} = \frac{3}{6} + \frac{2}{6} = \frac{5}{6}$	$\frac{5}{8} - \frac{1}{4} = \frac{5}{8} - \frac{2}{8} = \frac{3}{8}$
$\frac{3}{4} + \frac{1}{12} = \frac{9}{12} + \frac{1}{12} = \frac{10}{12} = \frac{5}{6}$	$\frac{2}{9} + \frac{2}{3} = \frac{2}{9} + \frac{6}{9} = \frac{8}{9}$
$\frac{7}{8} - \frac{3}{10} = \frac{35}{40} - \frac{12}{40} = \frac{23}{40}$	$\frac{5}{6} - \frac{4}{5} = \frac{25}{30} - \frac{24}{30} = \frac{1}{30}$
$\frac{2}{7} + \frac{5}{9} = \frac{18}{63} + \frac{35}{63} = \frac{53}{63}$	$\frac{3}{5} - \frac{7}{12} = \frac{36}{60} - \frac{35}{60} = \frac{1}{60}$