

# Subtracting Fractions

Subtracting fractions is easy when you have common denominators.



X ← The number on the top is the "numerator."

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Y ← The number on the bottom is the "denominator."

**Example:**  $\frac{3}{4} - \frac{1}{4} = ?$

The denominator in both numbers is 4. All we have to do is subtract the numerators.

$$\frac{3}{4} - \frac{1}{4} = \frac{3-1}{4} = \frac{2}{4} = \frac{1}{2}$$

For each problem below, follow the steps used in the example to find your solution.  
Be sure to reduce your fraction to its lowest terms.

1)  $\frac{4}{8} - \frac{1}{8} = ?$

5)  $\frac{15}{25} - \frac{10}{25} = ?$

2)  $\frac{5}{10} - \frac{3}{10} = ?$

6)  $\frac{25}{50} - \frac{5}{50} = ?$

3)  $\frac{9}{12} - \frac{6}{12} = ?$

7)  $\frac{9}{63} - \frac{6}{63} = ?$

4)  $\frac{8}{15} - \frac{3}{15} = ?$

8)  $\frac{30}{100} - \frac{20}{100} = ?$

# Subtracting Fractions

Let's learn subtracting fractions with uncommon denominators!



-If you want to subtract two fractions together, both fractions must have the same or "common" denominator.

-A common denominator is a shared multiple of the denominators in two or more fractions.

**Example:**  $\frac{2}{3} - \frac{1}{9} = ?$

-The first step in solving this equation is to find the common denominator.

-3 is a multiple of 9;  $3 \times 3 = 9$ . We have found our common denominator, which is 9.

-If we multiply the denominator by 3, we must multiply the numerator by 3 as well.

-Our new equation and result will look like this:

$$\begin{array}{l} 3 \times \frac{2}{3} - \frac{1}{9} = \frac{6}{9} - \frac{1}{9} = \frac{5}{9} \\ 3 \times \frac{2}{3} - \frac{1}{9} = \frac{6}{9} - \frac{1}{9} = \frac{5}{9} \end{array}$$

For each problem below, follow the steps used in the example to find your solution.

Be sure to reduce your fraction to its lowest terms.

1)  $\frac{2}{4} - \frac{2}{5} = ?$

5)  $\frac{28}{25} - \frac{5}{5} = ?$

2)  $\frac{2}{3} - \frac{3}{6} = ?$

6)  $\frac{6}{6} - \frac{1}{9} = ?$

3)  $\frac{4}{10} - \frac{3}{8} = ?$

7)  $\frac{10}{30} - \frac{3}{10} = ?$

4)  $\frac{16}{15} - \frac{4}{5} = ?$

8)  $\frac{4}{8} - \frac{1}{2} = ?$