

Adding & Subtracting Fractions with Unlike Denominators

Step 1: Find an equivalent fraction for both fractions, so that they both have the same denominator

$$\frac{1}{8} + \frac{1}{6} \quad \text{a) find the LCM of the denominators} \quad \begin{array}{l} 8: 8, 16, \mathbf{24}, 32 \\ 6: 6, 12, 18, \mathbf{24} \end{array}$$

b) find the equivalent fraction

$$\frac{1}{8} \times \frac{3}{3} = \frac{\mathbf{3}}{\mathbf{24}} \quad \frac{1}{6} \times \frac{4}{4} = \frac{\mathbf{4}}{\mathbf{24}}$$

Step 2: Once the denominators are the same, add or subtract the numerators

$$\frac{\mathbf{3}}{\mathbf{24}} + \frac{\mathbf{4}}{\mathbf{24}} = \frac{\mathbf{7}}{\mathbf{24}}$$

Step 3: The denominator stays the same

$$\frac{\mathbf{3}}{\mathbf{24}} + \frac{\mathbf{4}}{\mathbf{24}} = \frac{\mathbf{7}}{\mathbf{24}}$$

Step 4: Simplify if necessary

Practice

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

$$\frac{3}{4} - \frac{2}{6} =$$

$$\frac{1}{5} + \frac{1}{3} =$$

$$\frac{2}{9} + \frac{1}{3} =$$

$$\frac{3}{8} + \frac{1}{2} =$$