Adding / Subtracting Fractions

1. **Determine if the fractions have the same denominator.**

$$\frac{7}{6} - \frac{2}{6} = \frac{5}{6}$$ ✓ OK to add or subtract

$$\frac{9}{8} + \frac{7}{12} =$$ ✗ LCD Required

2. **If the fractions have different denominators, the least common denominator must be determined.**

$$\frac{9}{\textcircled{8}} + \frac{7}{\textcircled{12}} =$$

LCM of **8** and **12** :

$$\begin{array}{ccc} & x1 & x2 & x3 \\ 8 : & 8, & 16, & 24 \end{array}$$

$$\begin{array}{ccc} & x1 & x2 \\ 12 : & 12, & 24 \end{array}$$

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3. Multiply the numerator and denominator of both fractions by the number of times required to make the denominator equal to the least common denominator.

$$\frac{3}{3} \cdot \frac{9}{8} + \frac{7}{12} \cdot \frac{2}{2} = \frac{27}{24} + \frac{14}{24}$$

4. Add or subtract the numerators of the fractions; the denominator remains the same. Simplify the final fraction if possible.

$$\frac{27}{24} + \frac{14}{24} = \frac{41}{24}$$