

4.2 Add & Subtract Fractions with Unlike Denominators

Determine:

$$\frac{3}{5} + \frac{1}{5} = \frac{4}{5}$$

$$\frac{5}{8} - \frac{3}{8} = \frac{2}{8}$$

$$\frac{2}{3} + \frac{5}{3} = \frac{7}{3}$$

$$\frac{17}{12} - \frac{1}{12} = \frac{16}{12}$$

$$\frac{16}{12} = \frac{4}{3} \approx 1\frac{1}{3}$$

improper

$$\frac{7}{3} = 2\frac{1}{3}$$

* always lowest form $\frac{2}{8} = \frac{1}{4}$ mixed

To add or subtract fractions (rationals) there **MUST** be a common denominator. To make things as simple as possible we use the **LOWEST COMMON DENOMINATOR (LCD)**.

Determine:

$$\frac{1}{3} + \frac{3}{4} = \frac{4}{12} + \frac{9}{12} = \frac{13}{12} = 1\frac{1}{12}$$

$$\frac{5}{8} - \frac{1}{6} = \frac{15}{24} - \frac{4}{24} = \frac{11}{24}$$

$$\frac{2}{5} + \frac{1}{2} - \frac{2}{3} = \frac{12}{30} + \frac{15}{30} - \frac{20}{30} = \frac{7}{30}$$

$$\frac{3}{20} - \frac{4}{25} = \frac{15}{100} - \frac{16}{100} = \frac{-1}{100}$$

$$\frac{3}{10} + \frac{1}{2} - \frac{3}{4} = \frac{6}{20} + \frac{10}{20} - \frac{15}{20} = \frac{1}{20}$$

$$\frac{2}{5} + \frac{3}{10} = \frac{4}{10} + \frac{3}{10} = \frac{7}{10}$$

$$\frac{3}{12} - \frac{3}{4} = \frac{3}{12} - \frac{9}{12} = \frac{-6}{12} = -\frac{1}{2}$$

~~$\frac{1}{2}$~~

$$\frac{7}{10} - \frac{1}{2} + \frac{3}{5} = \frac{7}{10} - \frac{5}{10} + \frac{6}{10} = \frac{8}{10} = \frac{4}{5}$$