Lesson 4.4 Add and Subtract UNLIKE fractions

Objective: To add and subtract fractions with unlime denominators.

Ex.1 Find $\frac{1}{2}+\frac{1}{4}$.

$\frac{1}{2}\cdot\frac{2}{2}+\frac{1}{4}$

LCD: 2: 2, 4, 6, 8, 10
4: 4, 8, 12, 16, 20

$\frac{2}{4}+\frac{1}{4}=\frac{2+1}{4}=\boxed{\frac{3}{4}}$

Ex.2 Find $\left(-\frac{3}{4}+\frac{5}{9}\right)+\frac{7}{4}$

$\left(-\frac{3}{4}+\frac{5}{9}\right)+\frac{7}{4}=\left(\frac{5}{9}+\left(\frac{-3}{4}\right)\right)+\frac{7}{4}$ Communative

$=\frac{5}{9}+\left(-\frac{3}{4}+\frac{7}{4}\right)$ Associative

$=\frac{5}{9}+\frac{4}{4}=1$

$=\boxed{1\frac{5}{9}}$

Ex.3 Find $-\frac{2}{3}-\frac{1}{2}$.

$-\frac{2}{3}\cdot\frac{2}{2}-\frac{1}{2}\cdot\frac{3}{3}$

LCD: 2: 2, 4, 6, 8, 10
3: 3, 6, 9, 12, 15

$-\frac{4}{6}-\frac{3}{6}=\frac{-4-3}{6}=\frac{-4+(-3)}{6}=\frac{-7}{6}$ $6\overline{)7}$ $\begin{array}{r}1\\-6\\\hline 1\end{array}$ $=\boxed{-1\frac{1}{6}}$