

## 4.6 Complex Fractions and Review of Order of Operations

### \* Complex Fractions

1. Convert mixed numbers into improper fractions
2. Find the least common denominator (LCD) of the fractions.
3. Multiply each term in the numerator and denominator by LCD.
4. Simplify.

a.  $\frac{\frac{1}{2} + \frac{1}{6}}{\frac{3}{4} - \frac{2}{3}}$

b.  $\frac{\frac{1}{2} + \frac{1}{8}}{\frac{3}{4} - \frac{1}{6}}$

c.  $\frac{2\frac{3}{4}}{\frac{x}{5} - 1\frac{1}{2}}$

d.  $\frac{\frac{1}{2} + \frac{1}{6}}{\frac{3}{4} - \frac{2}{3}}$

$$\text{e. } \frac{\frac{7y}{10}}{\frac{1}{5}}$$

$$\text{f. } \frac{\frac{5}{9}}{\frac{35}{108}}$$

### \* Order of Operations

Recall

1. Perform all operations within grouping symbols:  $()$ ,  $\{\}$ ,  $[\ ]$ ,  $| |$ ,  $\sqrt{\quad}$ ,  $---$
2. Evaluate exponents
3. Multiply or Divide (in order from left to right)
4. Add or Subtract (in order from left to right)

$$\text{a. } \left(\frac{2}{3}\right)^3 - 2$$

$$\text{b. } -5\frac{3}{8} - \frac{7}{10} \div \left(-\frac{7}{30}\right)$$

$$\text{c. } \frac{3}{4} + 2\frac{4}{5} \cdot \left(-\frac{5}{6}\right)$$

$$\text{d. } \left| -\frac{1}{2} + \frac{1}{5} \right| \left( \frac{7}{8} + \frac{1}{12} \right)$$

$$\text{e. } \left( \frac{1}{2} + \frac{1}{3} \right) \div \left( \frac{3}{4} - \frac{1}{8} \right)$$

$$\text{f. } \left( \frac{1}{2} \right)^3 - 6 \left( \frac{3}{5} + \frac{2}{3} \right)$$

g.  $\left(1\frac{2}{3}\right)^2 + 2\frac{1}{2} \div \frac{5}{8}$

h.  $4\left(\frac{3}{4}\right)\left(\frac{2}{3}\right)^2 + 3\frac{1}{2}$

i.  $2\left(\frac{5}{8}\right)\left(1\frac{1}{3} + 3\right)$