

## 4.5 Adding and Subtracting Unlike Fractions

### \* Adding and Subtracting Unlike Fractions

1. Find the least common denominator (LCD) of the fractions.
2. Write each fraction as an equivalent fraction whose denominator is the LCD.
3. Add or Subtract the like fractions.
4. Write the result fraction in simplest form.

**Ex 1.** Perform indicated operations.

a.  $\frac{1}{7} + \frac{8}{21}$

b.  $-\frac{1}{5} + \frac{9}{20}$

c.  $\frac{4}{15} - \frac{9}{10}$

d.  $\frac{5y}{6} + \frac{2y}{9}$

e.  $-\frac{7}{18} - \left(-\frac{5}{24}\right)$

f.  $-\frac{5}{9} - \frac{2}{15}$

g.  $\frac{7}{3x} - \frac{9}{6xy}$

$$\text{h. } -\frac{3}{4} - \frac{1}{14} - \left(-\frac{6}{7}\right)$$

$$\text{i. } \frac{5}{8} - \frac{1}{3} - \frac{1}{12}$$

$$\text{j. } \frac{2}{3} - 2 - \left(-\frac{10}{11}\right)$$

$$\text{k. } 2\frac{1}{6} + 4\frac{2}{5}$$

$$\text{l. } 2\frac{1}{3} + 5\frac{3}{8}$$

$$\text{m. } 3\frac{5}{14} + 2\frac{6}{7}$$

$$\text{n. } 3\frac{4}{5} + 1\frac{4}{15}$$

$$\text{o. } 32\frac{7}{9} - 16\frac{5}{18}$$

$$\text{p. } 8\frac{3}{7} - 5\frac{2}{21}$$

$$\text{q. } 9\frac{7}{15} - 4\frac{3}{5}$$

$$\text{r. } 7\frac{3}{14} - 3\frac{6}{7}$$

$$\text{s. } 25 - 10\frac{2}{9}$$

t.  $14 - 8\frac{3}{7}$

u.  $12 + 3\frac{6}{7} + 2\frac{1}{5}$

v.  $2\frac{4}{5} + 5 + 1\frac{1}{2}$

**\* Writing Fractions in Order**

**Ex 2.** Insert < or > or = to form a true statement.

a.  $\frac{5}{8}$  —  $\frac{11}{20}$

b.  $-\frac{17}{20}$  —  $-\frac{4}{5}$

c.  $-3\frac{4}{7}$  —  $-3\frac{2}{3}$