# 5.5 (page 177) Adding & Subtracting Like Fractions

## Adding Like Fractions:

To add fractions with like denominators, add the numerators.

## Subtracting Like Fractions:

To subtract fractions with like denominators, subtract the numerators.

Remember: The denominators cannot be zero. You can never divide by zero.

Solve each equation. Write each solution in simplest form.

$$\frac{5}{7} + \frac{8}{7} = r$$

$$\frac{5+8}{7} = \frac{13}{7} \text{ or } 1\frac{6}{7}$$

$$7\overline{)13} \quad 1\tfrac{6}{7}$$
$$-7$$
$$6$$

Solve each equation. Write each solution in simplest form.

$$\frac{21}{5} + \frac{19}{5} = r$$

$$\frac{21+19}{5} = \frac{40 \div 5}{5 \div 5} = \frac{8}{1} = \boxed{8}$$

Solve each equation. Write each solution in simplest form.

$$\frac{17}{20} - \frac{2}{20} = g$$

$$\frac{17-2}{20} = \frac{15 \div 5}{20 \div 5} = \boxed{\frac{3}{4}}$$

Solve each equation. Write each solution in simplest form.

$\frac{4}{9} - \frac{15}{9} = r$

$\frac{4-15}{9} = \frac{4+-15}{9} = \boxed{\frac{-11}{9} \text{ or } -1\frac{2}{9}}$

$9\overline{)11}$ $1\frac{2}{9}$, $-9$, $2$

Solve each equation. Write each solution in simplest form.

$\frac{42}{16} + \frac{12}{16} = j$

$\frac{42+12}{16} = \frac{54}{16} \div 2 \div 2 = \boxed{\frac{27}{8} \text{ or } 3\frac{3}{8}}$

$8\overline{)27}$ $3\frac{3}{8}$, $-24$, $3$

Solve each equation. Write each solution in simplest form.

$$\frac{18}{26} + \frac{-15}{26} = m$$

$$\frac{18+-15}{26} = \boxed{\frac{3}{26}}$$

## 5.6 (page 180) Adding & Subtracting Unlike Fractions

### Adding & Subtracting Unlike Fractions

To find the sum or difference of two fractions with unlike denominators, rename the fractions with a common denominator. Then add or subtract & simplify.

Reminder: Use the least common denominator (LCD) method to rename the fractions with a common denominator.

(Chapter 4 Section 8 in your textbook)

## 5.6 (page 180) Adding & Subtracting Unlike Fractions

Example: Solve each equation. Write the solution in simplest form.

$$\left(-\frac{1}{3}\right) + \frac{3}{8}$$

$$\frac{-8}{24} + \frac{9}{24} = \boxed{\frac{1}{24}}$$

## 5.6 (page 180) Adding & Subtracting Unlike Fractions

Example: Solve each equation. Write the solution in simplest form.

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

$$\frac{27}{15} + \frac{-20}{15} = \boxed{\frac{7}{15}}$$

## 5.6 (page 180) Adding & Subtracting Unlike Fractions

Example: Solve each equation. Write the solution in simplest form.

$$\left(-\frac{4}{3}\right)_{\cdot 2}^{\cdot 2} - \left(-\frac{3}{2}\right)_{\cdot 3}^{\cdot 3}$$

$$\frac{-8}{6} + \frac{+9}{6} = \frac{-8+9}{6} = \boxed{\frac{1}{6}}$$

## 5.6 (page 180) Adding & Subtracting Unlike Fractions

Example: Solve each equation. Write the solution in simplest form.

$$\frac{9}{5}\cdot\frac{8}{8} - \frac{5}{8}\cdot\frac{5}{5}$$

$$\frac{72}{40} - \frac{25}{40} = \boxed{\frac{47}{40} \text{ or } 1\frac{7}{40}}$$

## 5.6 (page 180) Adding & Subtracting Unlike Fractions

Example: Solve each equation. Write the solution in simplest form.

$$\frac{2}{1}\cdot\frac{8}{8} - \frac{13}{8}$$

$$\frac{16}{8} - \frac{13}{8} = \boxed{\frac{3}{8}}$$

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

$$-4\frac{2}{7} \times +2 = -\frac{30}{7}$$

$$6\frac{7}{8} \times +7 = \frac{55}{8}$$

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