Adding and Subtracting Fractions

To add or subtract two fractions with the same denominator, add or subtract the numerators. Write the result in simplest form.

Example 1: Add or subtract. - <del>7</del> 8

 $\frac{3}{8} + \frac{4}{8}$ 

 $-\frac{2}{12}=\frac{3}{12}=\frac{1}{2}$ To add or subtract two fractions with different denominators, write equivalent fractions with a common denominator. Then add or subtract and write the result in simplest form.

Example 2: Add or subtract. 3·7 + 3·2

Multiplying and Dividing Fractions

To multiply two fractions, multiply the numerators and multiply the denominators. Then write the result in simplest form.

Example 3: Multiply.

$$\frac{3}{8}: \frac{2}{5} = \frac{6}{40} = \frac{3}{20} \qquad \qquad \frac{1}{10}: \frac{4}{7} = \frac{4}{70} = \frac{2}{35}$$

To divide by a fraction, multiply by its reciprocal and write the product in simplest form.

Example 4: Divide.  

$$\frac{3}{4} \cdot \frac{3}{4} \div \frac{1}{2}$$

$$\frac{3}{4} \div \frac{1}{2}$$

$$\frac{3}{4} \div \frac{2}{1} = \frac{6}{4} = \frac{3}{2}$$

$$\frac{8}{5} \div \frac{1}{3}$$

$$\frac{8}{5} \cdot \frac{3}{1} = \frac{24}{5}$$

