1/13/10

Objective:

TSWBAT divide whole numbers by fractions and divide fractions by fractions.

Vocabulary:

reciprocal: switching the numerator and denominator in a fraction.

Example:

the reciprocal of $\frac{1}{2}$ is $\frac{2}{1}$

Dividing Whole Numbers by Fractions

Find $12 \div \frac{8}{9}$

1. Turn the whole number into a fraction.

$$12 = \frac{12}{1}$$

2. Find the reciprocal of the second fraction.

$$\frac{12}{1} \div \frac{8}{9} \rightarrow \frac{12}{1} \times \frac{9}{8}$$

3. Multiply.

$$\frac{\overset{3}{\cancel{12}}}{1} \times \frac{9}{\underset{2}{\cancel{8}}} = \frac{27}{2}$$

4. Simplify.

$$27 \div 2 = 13 \text{ R } 1 \quad (27 - 26 = 1)$$

answer $13\frac{1}{2}$

Practice:

Find the quotient.

① $8 \div \frac{3}{4}$

② $7 \div \frac{2}{9}$

③ $12 \div \frac{8}{7}$

Dividing Fractions by Fractions

Find $\frac{5}{10} \div \frac{5}{6}$

1. Find the reciprocal of the second fraction.

$\frac{5}{6} \rightarrow \frac{6}{5}$

2. Multiply.

$\frac{\cancel{5}^{1}}{\cancel{10}_{5}} \times \frac{\cancel{6}^{3}}{\cancel{5}_{1}} = \frac{3}{5}$

3. Simplify.

$\frac{3}{5}$ is in simplest form

Practice:

Find each quotient.

① $\frac{9}{16} \div \frac{3}{4}$

② $\frac{5}{8} \div \frac{5}{6}$

③ $\frac{8}{15} \div \frac{2}{3}$

Practice:

Write the reciprocal

① $\frac{2}{5}$ ② 11

Find each quotient

③ $11 \div \frac{121}{10}$

④ $\frac{5}{12} \div 15$

⑤ $\frac{4}{3} \div \frac{5}{3}$

⑥ $\frac{8}{9} \div \frac{4}{5}$

Homework:

Reteach 5-3