Do Now:

1.) $\frac{5}{6} * \frac{21}{10}$

2.) Simplify $\frac{16}{24}$

Write as improper fractions

3.) $6\frac{1}{3}$

4.) $2\frac{5}{6}$

Do Now: Evaluate the expression.

Use PEMDAS

1. $-\frac{7}{8} + 5\frac{1}{2} * \frac{11}{15}$ $\frac{379}{120}$

2. $\frac{5}{2}\left(\frac{8}{9} - \frac{5}{12}\right)$ $\frac{85}{72}$

3. $5 - \left(\frac{1}{3} + \frac{1}{6}\right)$ $\frac{9}{2}$

5.4 Dividing Fractions

Keep Change Flip

7.NS
7.EE

- SWBAT divide fractions and mixed numbers.
- SWBAT understand numbers; compute fluently.

- Calculators: No

Reciprocal (multiplicative inverse) - two nonzero numbers whose product is 1

(Number • Reciprocal = 1)

Number	Reciprocal	Product
2/3	$\frac{3}{2}$	$\frac{2}{3}\left(\frac{3}{2}\right) = \frac{6}{6} = 1$
5 $\frac{5}{1}$	$\frac{1}{5}$	$\frac{5}{1}\left(\frac{1}{5}\right) = \frac{5}{5} = 1$
-1/7	$\frac{-7}{1}$	$-\frac{1}{7}\left(\frac{-7}{1}\right) = \frac{7}{7} = 1$
7/4	$\frac{4}{7}$	$\frac{7}{4}\left(\frac{4}{7}\right) = \frac{28}{28} = 1$

Dividing Fractions

To divide a fraction, multiply by its reciprocal.

$$\frac{a}{b} \div \frac{c}{d} = \frac{a}{b} * \frac{d}{c}$$, where (b, c, d ≠ 0)

Keep Change Flip

Find the quotient. Simplify if possible. (Reduce)

a.) $\frac{5}{6} \div \frac{10}{21}$

$\frac{\cancel{5}^{1}}{\cancel{6}_{2}} \cdot \frac{\cancel{21}^{7}}{\cancel{10}_{2}} = \frac{1}{2} \cdot \frac{7}{2} = \frac{7}{4}$

b.) $\frac{9}{14} \div \frac{-2}{7}$

$\frac{9}{\cancel{14}_{7}} \cdot \frac{\cancel{7}^{1}}{-2} = \frac{9}{7} \cdot \frac{1}{-2} = \frac{-9}{14}$

$-\frac{9}{14}$ $\frac{9}{-14}$

Find the quotient. Simplify if possible.

a.) $\frac{7}{9} \div \frac{2}{3}$

b.) $\frac{-11}{12} \div \frac{5}{6}$

Find the quotient. Simplify if possible.

a.) $\frac{6}{13} \div 3 = \frac{6}{13} \div \frac{3}{1}$

$= \frac{\cancel{6}^{2}}{13} \cdot \frac{1}{\cancel{3}_{1}}$

$= \frac{2}{13} \cdot \frac{1}{1} = \frac{2}{13}$

b.) $6\frac{1}{3} \div -2\frac{5}{6}$

$\frac{19}{3} \div \frac{-17}{6}$

$\frac{19}{\cancel{3}_{1}} \cdot \frac{\cancel{6}^{2}}{-17} = \frac{19}{1} \cdot \frac{2}{-17} = \frac{38}{-17}$

$\frac{-38}{17}$

Find the quotient. Simplify if possible.

a.) $\frac{10}{27} \div 5$

b.) $-8\frac{1}{4} \div 2\frac{5}{8}$

Amaia takes 16 of the 24 pictures of a roll of film on her first day of vacation. At this rate, how many days will 4 rolls of film last?

$\frac{\cancel{24}^{1}}{\cancel{16}_{1}} \cdot \frac{\cancel{16}^{1}}{\cancel{24}_{1}} \cdot d = 4 \cdot \frac{24}{16}$

$1 \cdot d = \frac{\cancel{4}^{1}}{1} \cdot \frac{24}{\cancel{16}_{4}}$

$d = \frac{24}{4}$

$d = 6$

6 days

How many hamburgers can German make from 5 pounds of hamburger if he uses 1/4 pound of meat per hamburger?

Solve the equation. $x =$ $a =$

1.) $\frac{4}{3} \cdot \frac{3}{4} a = 15 \cdot \frac{4}{3}$

$a = \frac{15}{1} \cdot \frac{4}{3} = \frac{20}{1} = 20$

Solve the equation.

2.) $-2\frac{9}{17} r = 3$

$\frac{17}{-43} \cdot \frac{-43}{17} r = 3 \cdot \frac{17}{-43}$

$r = \frac{3 \cdot 17}{1 \cdot (-43)} = \frac{51}{-43}$

Exit Ticket 5.4

Explain how to divide mixed numbers.

"Don't blame the sea if you cannot catch a fish."

Working individually or with a partner, complete the workbook.

Workbook pg.

Reflection of Today's Lesson

5.4 Dividing Fractions

7.NS
7.EE

- SWBAT divide fractions and mixed numbers.
- SWBAT understand numbers; compute fluently.

- Calculators: No

Homework

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