October 14, 2011

No Warm-Up since it's Friday!!

Save your homework until Monday...

10/14 - Multiplying/Dividing Fractions

MULTIPLICATION

Method 1:

Multiply then simplify

$$\frac{5}{6} \cdot \frac{9}{10} = \frac{45}{60} = \frac{3}{4}$$

Method 2:

Simplify then multiply

$$\frac{\cancel{5}^{1}}{\cancel{6}_{2}} \cdot \frac{\cancel{9}^{3}}{\cancel{10}_{2}} = \frac{3}{4}$$

Cross-Cancel

You can only cancel one on top with one on the bottom

Multiply each...use either method.

$$\frac{\cancel{2}^{1}}{3} \cdot \frac{1}{\cancel{4}_{2}} = \frac{1}{6}$$

$$\frac{-4}{5} \cdot \frac{3}{5}$$

$$= \frac{-12}{25}$$

$$\frac{-\cancel{3}^{-1}}{4} \cdot \frac{-5}{\cancel{6}_{2}}$$

$$= \frac{5}{8}$$

Multiply...

Whole #'s belong on the TOP

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

$$= \frac{-8}{3}$$

$$\begin{array}{r} 2 \\ 3\overline{)8} \\ -6 \\ \hline 2 \end{array}$$

$$= -2\tfrac{2}{3}$$

$$\frac{-9}{\cancel{10}_{5}} \cdot \frac{-\cancel{12}^{6}}{1}$$

$$= \frac{54}{5}$$

$$\begin{array}{r} 10 \\ 5\overline{)54} \\ -50 \\ \hline 4 \end{array}$$

$$= 10\tfrac{4}{5}$$

Division

"Multiply by the reciprocal"

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

$$= \frac{2}{3} \cdot \frac{2}{1}$$

$$= \frac{4}{3} = 1\frac{1}{3}$$

$$\frac{3}{8} \div \frac{6}{7}$$

$$= \frac{\cancel{3}^{1}}{8} \cdot \frac{7}{\cancel{6}_{2}}$$

$$= \frac{7}{16}$$

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

$$\frac{-3}{\cancel{4}_{2}} \cdot \frac{\cancel{2}^{1}}{1} = \frac{-3}{2}$$

$$= -1\frac{1}{2}$$

$$\frac{-5}{6} \div \frac{-8}{9}$$

$$= \frac{-5}{\cancel{6}_{2}} \cdot \frac{-\cancel{9}^{3}}{8}$$

$$= \frac{15}{16}$$

Divide...

$$\frac{6}{1} \div \frac{-2}{3}$$

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

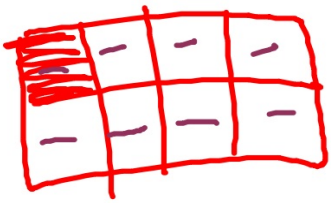
$$= \frac{-9}{1}$$

$$= -9$$

$$\frac{3}{4} \div \frac{-6}{1}$$

$$= \frac{\cancel{3}^{1}}{4} \cdot \frac{-1}{\cancel{6}_{2}}$$

$$= \frac{-1}{8}$$



Homework:

LAVENDAR worksheet

$$\frac{-}{+} = -$$

$$\frac{+}{-} = -$$

Due: