

November 3, 2014

1st
2nd

No starter today! Instead, get out any assignment that needs to be corrected or scored.



11/3 - Dividing Rational Numbers - Fractions

Discuss with your partners:

How are multiply and divide related?
Check one with the other
opposite operations
you use multiply in long-division
P^em^das
learned at the same time
Multi-step problems
Both use "Batman Rules"

Work with your partners:
Give the reciprocal of each number:

$$\frac{2}{3}$$

$$\frac{1}{4}$$

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

$$-6$$

$$\frac{3}{2}$$

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

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

$$-\frac{1}{6}$$

Dividing fractions is as easy as pie
When you flip the 2nd fraction and multiply.

To divide fractions, flip the **SECOND** fraction over
and then multiply instead of divide.

This is also referred to as "multiply by the reciprocal"

Divide:

$$\begin{aligned} & \frac{2}{3} \div \frac{1}{2} \\ &= \frac{2}{3} \cdot \frac{2}{1} \\ &= \frac{4}{3} \\ &= 1\frac{1}{3} \end{aligned}$$

$$\begin{aligned} & \frac{3}{8} \div \frac{6}{7} \\ &= \frac{\cancel{3}}{8} \cdot \frac{7}{\cancel{6}_2} \\ &= \frac{7}{16} \end{aligned}$$

$$\begin{aligned} & \frac{-3}{4} \div \frac{1}{2} \\ &= -\frac{3}{4} \cdot \frac{2}{1} \\ &= -\frac{6}{4} \\ &= -\frac{3}{2} \\ &= -1\frac{1}{2} \end{aligned}$$

$$\begin{aligned} & \frac{-5}{6} \div \frac{-8}{9} \\ &= -\frac{5}{6} \cdot -\frac{\cancel{8}^3}{9} \\ &= \frac{15}{6} \\ &= \frac{5}{2} \end{aligned}$$

Do NOT
cancel
in \div .

Leave
negatives
in the TOP

Divide:

$$\begin{aligned} 6 \div \frac{-2}{3} \\ = \frac{6}{1} \cdot \frac{-3}{-2} \\ = \frac{-9}{1} \\ = -9 \end{aligned}$$

$$\begin{aligned} \frac{3}{4} \div \frac{-6}{1} \\ = \frac{3}{4} \cdot \frac{-1}{6} \\ = \frac{-1}{8} \end{aligned}$$

Homework

White WS 8

Due Wednesday