7th Grade
Oct 26, 2020

Please get out your THQ if you have not turned it in yet, and get out your video notes from Friday.

Today we will:
-review VN and do examples on multiplying and dividing fractions

I will need binder checks from Christopher, Jaden, Joseph, Gabe

HOMEWORK:

HW Prac WS

ALEKS-60 minutes due by 11:59pm Oct 26

① To multiply fractions, multiply across **numerator** and **denominator**.

② If there is a mixed number, first change it to an **improper fraction**.

③ **Simplify** your answer.

① To divide fractions, **Multiply** by the **reciprocal**.

KCF

Keep (first fraction) **change** ($\div$ to ×) **Flip** (second fraction)

② Then multiply like above.

$\frac{1}{4} \cdot \left(-\frac{7}{3}\right) = -\frac{7}{12}$

$2\frac{1}{3} \cdot 2\frac{5}{7} =$

$\frac{7}{3} \cdot \frac{19}{7} = \frac{19}{3} = 6\frac{1}{3}$

Follow integer rules for negatives:

Same sign → **positive** answer

different signs → **negative** answer

$\frac{2}{3} \div \frac{7}{3} = \frac{2}{3} \times \frac{3}{7}$

$= \boxed{\frac{2}{7}}$

$\frac{3}{4} \div \frac{5}{8} = \frac{3}{4} \times \frac{8}{5}$

$= \frac{6}{5}$

$= \boxed{1\frac{1}{5}}$

$\frac{b}{2d} \div \frac{2}{9c} =$

Evaluate if $x = \frac{3}{8}$, $y = -2\frac{2}{9}$, $z = -\frac{1}{10}$.

$xy = \frac{3}{8} \cdot -\frac{20}{9} = \left(-\frac{5}{6}\right)$

$5x = \frac{5}{1} \cdot \frac{3}{8} = \frac{15}{8} = \boxed{1\frac{7}{8}}$

$yz = -\frac{20}{9} \cdot -\frac{7}{10} = 1\frac{5}{9}$

Simplify.

$\frac{x^2}{4} \div \frac{y}{2} = \frac{x^2}{4} \times \frac{2}{y} = \boxed{\frac{x^2}{2y}}$

$\frac{7}{gh} \div \frac{5}{4fh} = \frac{7}{gh} \cdot \frac{4fh}{5} = \boxed{\frac{28f}{5g}}$

$$\frac{b}{2d} \div \frac{2}{9c} = \frac{b}{2d} \times \frac{9c}{2} = \boxed{\frac{9bc}{4d}}$$

$= 2b$

$\boxed{= 2b}$

Examples to write directly into your binder:

$$\frac{3}{7} \cdot \frac{1}{6}$$

$$-\frac{1}{15}\left(-\frac{10}{13}\right)$$

$$\frac{\cancel{3}^{1}}{7} \cdot \frac{1}{\cancel{6}\,2} = \frac{1}{14}$$

$$-\frac{1}{\cancel{15}\,3} \cdot -\frac{\cancel{10}^{2}}{13} = \boxed{\frac{2}{39}} \;\; \smile$$

$$\times \frac{13}{3}$$
$$\overline{39}$$

$$3\frac{1}{3}\left(-\frac{1}{5}\right) \quad \frac{-\cancel{10}}{3} \times \frac{1}{\cancel{5}_{1}} = -\frac{2}{3} \quad \boxed{-\frac{2}{3}}$$

More examples to write in binder:

Evaluate each expression if $a = \frac{10}{24}$, $b = -3\frac{1}{8}$, and $c = -\frac{4}{5}$. Write the product in simplest form. (Example 3)

$2c$ $-4bc$

Divide.

$$-\frac{4}{5} \div \frac{\bar{8}}{9}$$

$$-2\frac{1}{5} \div \left(-3\frac{2}{3}\right)$$

Simplify.

$$\frac{4ab}{c} \div \frac{\bar{3a}}{2c}$$

$$\frac{4\overset{1}{ab}}{\cancel{c}} \times \frac{2\overset{1}{\cancel{c}}}{3\overset{1}{\cancel{a}}} = \frac{8b}{3}$$

$$\frac{10bc}{a} \div \frac{5c}{4}$$

$$\frac{10b\overset{1}{\cancel{c}}}{a} \times \frac{4}{5\overset{1}{\cancel{c}}} = \frac{40b}{5a} \div \frac{5}{5} = \boxed{\frac{8b}{1a}} \quad !!$$

Math Chapter 3

TITLE: Operations with Rational Numbers

Date	Lesson	Topic/Assignment
10-19	1	Fractions and Decimals Video Notes
10-20	1	HW WS
10-20	1	HW Practice WS (in-class)
10-21	2	Rational Numbers Video Notes
10-21	2	HW WS
10-22	2	Number Sets Notes
10-23	2	Packet
10-23	3	Multiply and Divide Fractions VN
10-26	3	HW Practice WS

Lesson 3 Homework Practice
Multiplying Rational Numbers

Find each product. Write in simplest form.

1. $\dfrac{3}{4} \cdot \dfrac{2}{3}$

2. $-\dfrac{3}{4} \cdot \dfrac{10}{27}$

3. $-50 \cdot \dfrac{3}{1000}$

4. $4\dfrac{4}{7} \cdot 9\dfrac{1}{3}$

5. $\dfrac{6m}{13} \cdot \dfrac{2}{mn}$

6. $\dfrac{4x}{3y} \cdot \dfrac{9y}{2x}$

7. $\dfrac{2a}{b} \cdot \dfrac{c}{2d}$

Evaluate each expression if $a = -\dfrac{5}{6}$, $b = -3\dfrac{3}{8}$, **and** $c = \dfrac{7}{10}$. **Write the product in simplest form.**

8. bc

9. ac

10. $4\dfrac{2}{5} c$

Lesson 4 Homework Practice
Dividing Rational Numbers

Find each quotient. Write in simplest form.

1. $\dfrac{1}{2} \div \dfrac{1}{10}$

2. $-\dfrac{3}{8} \div \dfrac{9}{24}$

3. $-1\dfrac{1}{2} \div \dfrac{1}{4}$

4. $-3\dfrac{2}{9} \div \dfrac{4}{27}$

5. $\dfrac{2x}{3} \div \dfrac{1}{9}$

6. $\dfrac{a}{4} \div \dfrac{a}{8}$

7. $\dfrac{4k}{5} \div \dfrac{25}{2k}$

8. $\dfrac{ab}{8} \div \dfrac{b}{a}$

9. Evaluate $x \div y$ if $x = 3\dfrac{1}{2}$ and $y = \dfrac{3}{4}$.

10. Evaluate $w \div z$ if $w = \dfrac{6}{7}$ and $z = 3$.