

Name _____

Date _____

Mr. Tallman

Math 7

Lesson #15 – Multiplying and Dividing Fractions

Recall:

- When multiplying and dividing integers with the same sign, the product/quotient will always be _____.
- When multiplying and dividing integers with different signs, the product/quotient will always be _____.

How to Multiply Fractions:

Example 1) Multiply. REMEMBER: Turn all mixed numbers into _____

A) $-11 \cdot 2$	B) $-2\frac{3}{4} \cdot \frac{2}{5}$
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Now, You Try! Evaluate each of the following.

2) $6 \cdot \left(-\frac{2}{3}\right)$	3) $-\frac{2}{3} \cdot 1\frac{3}{5}$	4) $\left(-\frac{3}{4}\right) \cdot 4$
5) $-\frac{2}{3} \cdot \left(-\frac{1}{2}\right) \cdot \frac{3}{5}$	6) $-\frac{2}{9} + \frac{10}{3}$	7) $-\frac{3}{8} \cdot \left(2\frac{1}{4}\right)$

How to Divide Fractions:

Example 8) Divide the following: $\frac{2}{3} \div 1\frac{1}{5}$

<u>Steps</u>	<u>Example</u>
1) Convert ALL mixed numbers into improper fractions.	
2) CHANGE the operation to multiplication and take the RECIPROCAL of the second fraction.	
3) Multiply. Remember to follow multiplication rules. Simplify if necessary.	

Example 9) Divide the following.

A) $\frac{2}{5} \div -\frac{1}{2}$	B) $\frac{-2}{3} \div (-5)$
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Think about it...

Example 10) Evaluate the following:

$$\frac{7}{\frac{10}{2} - \frac{2}{5}}$$

Now, You Try! Evaluate the following.

11) $-5 \div \frac{2}{3}$	12) $\frac{-3}{4} \cdot \left(-\frac{2}{3}\right)$	13) $3\frac{1}{2} \div \left(-4\frac{2}{7}\right)$
14) $-2\frac{5}{9} - \left(-3\frac{1}{3}\right)$	15) $-\frac{4}{13} \div \left(-\frac{4}{13}\right)$	16) $\frac{2}{3} \div \left(-\frac{2}{5}\right)$

17) Janet's height is $36\frac{1}{2}$ inches. Her older brother Mike is $54\frac{3}{4}$ inches tall. **How many times taller** is Mike than Janet?

18) A recipe calls for $\frac{2}{3}$ of a cup of flour per servings. How many cups of flour should you use if you are making $3\frac{1}{2}$ servings?