

## Lesson 5-4

### Multiply and Divide Fractions

Mr. Marroquin  
Pre-Algebra Class  
7<sup>th</sup> Grade

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#### Multiplying rational numbers (Part 1)

• Steps (3):

1. Multiply the numerators →  $\frac{3}{7} \cdot \frac{4}{8} = \underline{\hspace{2cm}}$
2. Multiply the denominators →
3. Simplify →  $=$

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#### Examples (4)

$$\frac{2}{5} \left( \frac{1}{3} \right) \quad \frac{2}{15}$$

$$-\frac{5}{6} \cdot \frac{2}{3} = -\frac{5}{9}$$

$$\frac{7}{8} \times \frac{5}{9} = \frac{35}{72}$$

$$-\frac{1}{4} \left( -\frac{3}{8} \right) = \frac{3}{32}$$

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### Cross Cancel (simplifying before multiplying)

- If the denominators and numerators have a common factor then you can simplify before multiplying.

$$\frac{9}{15} \times \frac{5}{9}$$

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### Examples using cross cancel (2)

$$\frac{2}{3} \times \frac{6}{7} =$$

$$= \frac{5}{14} \times \frac{21}{25} =$$

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### Multiplying mixed numbers

- Steps (3)
  - Convert to improper fractions
  - Simplify before multiplying if possible
  - Multiply straight across

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

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## Examples (2)

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

$$1\frac{1}{4} \times \frac{6}{9} =$$

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## Dividing fractions

- Steps
  - Multiply the dividend by the reciprocal of the divisor and then follow multiplication rules for fractions

• EX:

$$\frac{2}{9} \div \frac{2}{5} =$$

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## Examples (2)

$$\frac{5}{8} \div \frac{2}{3} =$$

$$\frac{5 \times 3}{8} \div \frac{10 \times 2}{27}$$

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What if I divide and there are mixed numbers??

- Convert any mixed numbers to improper fractions before multiplying

$$1\frac{1}{3} \div \frac{5}{6} =$$

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## Classwork / Homework

- PB 5-4
- HW: Pg 243 18-68even
- READ Lesson 5-5
- OH ..... and eat some Turkey ☺ after you have done my homework ☺

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