

<p><u>Cornell Notes</u></p> <p>Topic: <u>Multiplying and Dividing Fractions</u> <u>Lessons 2.1 & 2.2</u></p>	<p>Name: _____</p> <p>Date: _____</p> <p>Period: _____</p>
<p>Essential Question: What does it mean to multiply fractions? How can you divide by a fraction?</p>	
<p>Questions/Main Ideas:</p>	<p>Notes:</p>
	<p><u>Reciprocals</u>- two numbers whose product is 1.</p>
	<p>1.) Multiplying Fractions- Multiply the numerators and multiply the denominators.</p>
	<p>2.) Dividing Fractions- to divide a number by a fraction, multiply the number by the reciprocal of the fraction.</p>
<p>Multiplying Fractions</p>	<p>Find $\frac{8}{9} \times \frac{3}{4}$.</p> <p style="text-align: right;">Estimate $1 \times \frac{3}{4} = \frac{3}{4}$</p> $\frac{8}{9} \times \frac{3}{4} = \frac{8 \times 3}{9 \times 4}$ <p style="text-align: right;">Multiply the numerators.</p> $= \frac{\cancel{2}^2 \times \cancel{3}^1}{\cancel{3}^3 \times \cancel{4}^1}$ <p style="text-align: right;">Multiply the denominators.</p> <p style="text-align: right;">Divide out common factors.</p> $= \frac{2}{3}$ <p style="text-align: right;">Simplify.</p>
<p>Multiplying a Fraction and a Mixed Number</p>	<p>Find $\frac{1}{2} \times 2\frac{3}{4}$.</p> <p style="text-align: right;">Estimate $\frac{1}{2} \times 3 = 1\frac{1}{2}$</p> $\frac{1}{2} \times 2\frac{3}{4} = \frac{1}{2} \times \frac{11}{4}$ <p style="text-align: right;">Write $2\frac{3}{4}$ as the improper fraction $\frac{11}{4}$.</p> $= \frac{1 \times 11}{2 \times 4}$ <p style="text-align: right;">Multiply the numerators and the denominators.</p> $= \frac{11}{8}, \text{ or } 1\frac{3}{8}$ <p style="text-align: right;">Simplify.</p>

Dividing a Fraction by a Fraction	<p>Find $\frac{1}{6} \div \frac{2}{3}$.</p> $\frac{1}{6} \div \frac{2}{3} = \frac{1}{6} \times \frac{3}{2}$ $= \frac{1 \times \cancel{3}^1}{\cancel{6}^2 \times 2}$ $= \frac{1}{4}$ <p>Multiply by the reciprocal of $\frac{2}{3}$, which is $\frac{3}{2}$.</p> <p>Multiply fractions. Divide out the common factor 3.</p> <p>Simplify.</p>
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Dividing a Fraction by a Whole Number	<p>Find $\frac{4}{5} \div 2$.</p> $\frac{4}{5} \div 2 = \frac{4}{5} \div \frac{2}{1}$ $= \frac{4}{5} \times \frac{1}{2}$ $= \frac{\cancel{2}^2 \times 1}{5 \times \cancel{2}_1}$ $= \frac{2}{5}$ <p>Write 2 as an improper fraction.</p> <p>Multiply by the reciprocal of $\frac{2}{1}$, which is $\frac{1}{2}$.</p> <p>Multiply fractions. Divide out the common factor 2.</p> <p>Simplify.</p>

Summary: Students should write a summary reflecting the above essential question.