

<p>Cornell Notes</p> <p>Topic: Dividing Mixed Numbers Lesson 2.3</p>	<p>Name: _____</p> <p>Date: _____</p> <p>Period: _____</p>
<p>Essential Question: How can you model division by a mixed number?</p>	
<p>Questions/Main Ideas:</p>	<p>Notes:</p>
<p>Dividing Mixed Numbers</p>	<p>Write each mixed number as an improper fraction. Then divide as you would with proper fractions.</p>
<p>Example 1</p>	<p>Find $2\frac{1}{4} \div \frac{3}{8}$.</p> $2\frac{1}{4} \div \frac{3}{8} = \frac{9}{4} \div \frac{3}{8}$ $= \frac{9}{4} \times \frac{8}{3}$ $= \frac{\overset{3}{\cancel{9}} \times \overset{2}{\cancel{8}}}{\underset{1}{\cancel{4}} \times \underset{1}{\cancel{3}}}$ $= 6$ <p>Write $2\frac{1}{4}$ as the improper fraction $\frac{9}{4}$.</p> <p>Multiply by the reciprocal of $\frac{3}{8}$, which is $\frac{8}{3}$.</p> <p>Multiply fractions. Divide out common factors.</p> <p>Simplify.</p>
<p>Example 2</p>	<p>Find $3\frac{5}{6} \div 1\frac{2}{3}$.</p> $3\frac{5}{6} \div 1\frac{2}{3} = \frac{23}{6} \div \frac{5}{3}$ $= \frac{23}{6} \times \frac{3}{5}$ $= \frac{23 \times \cancel{3}^1}{\underset{2}{\cancel{6}} \times 5}$ $= \frac{23}{10}, \text{ or } 2\frac{3}{10}$ <p>Estimate $4 \div 2 = 2$</p> <p>Write each mixed number as an improper fraction.</p> <p>Multiply by the reciprocal of $\frac{5}{3}$, which is $\frac{3}{5}$.</p> <p>Multiply fractions. Divide out common factors.</p> <p>Simplify.</p> <p>So, the quotient is $2\frac{3}{10}$. Reasonable? $2\frac{3}{10} \approx 2$ ✓</p>

Example 3

Evaluate $5\frac{1}{4} \div 1\frac{1}{8} - \frac{2}{3}$.

$$5\frac{1}{4} \div 1\frac{1}{8} - \frac{2}{3} = \frac{21}{4} \div \frac{9}{8} - \frac{2}{3}$$

Write each mixed number as an improper fraction.

$$= \frac{21}{4} \times \frac{8}{9} - \frac{2}{3}$$

Multiply by the reciprocal of $\frac{9}{8}$, which is $\frac{8}{9}$.

$$= \frac{\overset{7}{\cancel{21}} \times \overset{2}{\cancel{8}}}{\underset{1}{\cancel{4}} \times \underset{3}{\cancel{9}}} - \frac{2}{3}$$

Multiply $\frac{21}{4}$ and $\frac{8}{9}$. Divide out common factors.

$$= \frac{14}{3} - \frac{2}{3}$$

Simplify.

$$= \frac{12}{3}, \text{ or } 4$$

Subtract.

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