

Lesson 6-10 • Group 1

Reinforce Understanding**6.10 Small Group • Group 1**

With my small group, I can divide mixed numbers by first changing them to improper fractions — one step at a time, with support.

Worked model

Agent Chen has a $3\frac{1}{2}$ -mile route cut into $\frac{1}{4}$ -mile segments. I want $3\frac{1}{2} \div \frac{1}{4}$.

1. First I convert $3\frac{1}{2}$. Multiply the whole by the bottom: $3 \times 2 = 6$. Add the top: $6 + 1 = 7$. So $3\frac{1}{2} = \frac{7}{2}$.
2. Now Keep, Change, Flip: keep $\frac{7}{2}$, change $\div$ to $\times$, flip $\frac{1}{4}$ to $\frac{4}{1}$.
3. Multiply: $\frac{7}{2} \times \frac{4}{1} = \frac{28}{2}$.
4. Simplify: $\frac{28}{2} = 14$. So $3\frac{1}{2} \div \frac{1}{4} = 14$ segments.

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. Convert each mixed number to an improper fraction.

Complete the table. Show how you found each value.

Mixed Number	Improper Fraction
$1\frac{3}{4}$	
$2\frac{2}{3}$	
$4\frac{1}{2}$	
$3\frac{1}{5}$	

Show your work

2. Convert each mixed number to an improper fraction, then divide.

Complete the table. Show how you found each value.

Problem	Convert to Improper	Keep-Change-Flip	Quotient
$3\frac{1}{2} \div \frac{1}{4}$			
$1\frac{3}{4} \div \frac{1}{2}$			
$2\frac{1}{3} \div \frac{7}{6}$			
$4\frac{1}{5} \div \frac{3}{5}$			

Show your work
