Dividing Mixed Numbers

You can follow these steps to find $5\frac{1}{3} \div 1\frac{1}{3}$ and $21 \div 2\frac{1}{3}$.

Step 1	Step 2	Step 3
First estimate. Then write each number as an improper fraction.	Find the reciprocal of the divisor. Rewrite as a multiplication problem.	Look for common factors. Simplify, then multiply.
Find $5\frac{1}{3} \div 1\frac{1}{3}$. Estimate $5 \div 1 = 5$. $5\frac{1}{3} \div 1\frac{1}{3} =$ $\downarrow \quad \downarrow$ $\frac{16}{3} \div \frac{4}{3}$	$\frac{16}{3} \div \frac{4}{3} =$ $\frac{16}{3} \times \frac{3}{4}$	$\frac{16}{3} \times \frac{3}{4} =$ $\overset{4}{\underset{1}{\cancel{\frac{16}{3}}}} \times \overset{1}{\underset{1}{\cancel{\frac{3}{4}}}} = \frac{4}{1} = 4$ 4 is close to 5, so the answer is reasonable.
Find $21 \div 2\frac{1}{3}$. Estimate $21 \div 2 = 10\frac{1}{2}$. $21 \div 2\frac{1}{3}$ $\downarrow \quad \downarrow$ $\frac{21}{1} \div \frac{7}{3}$	$\frac{21}{1} \div \frac{7}{3} =$ $\frac{21}{1} \times \frac{3}{7}$	$\frac{21}{1} \times \frac{3}{7} =$ $\overset{3}{\underset{1}{\cancel{\frac{21}{1}}}} \times \frac{3}{\cancel{7}} = \frac{9}{1} = 9$ 9 is close to $10\frac{1}{2}$, so the answer is reasonable.

Find each quotient. Simplify if possible.

1. $2\frac{2}{3} \div 3\frac{1}{4} =$ _____

2. $1\frac{3}{4} \div 4\frac{1}{8} =$ _____

3. $2\frac{1}{5} \div 2\frac{1}{3} =$ _____

4. $5\frac{1}{4} \div 3 =$ _____

5. $10 \div 3\frac{1}{4} =$ _____

6. $7\frac{1}{4} \div 2\frac{1}{8} =$ _____

7. Writing to Explain Paper needs to be cut for voting ballots. Each piece of paper is $10\frac{1}{2}$ in. long. Each ballot should be $1\frac{3}{4}$ in. long. How many ballots can be cut from one piece of paper?