8.7 Dividing with Whole & Mixed Numbers

To divide mixed numbers, rename each mixed number as an improper fraction. Then, divide the fractions as we did in section 6 in chapter 8.

"Keep it. Change it. Flip it."

Example: Find each quotient. Write in simplest form

1.) $4\frac{2}{3} \div 5\frac{1}{3}$

$\frac{14}{3} \div \frac{16}{3}$

$\frac{14}{3} \cdot \frac{3}{16} = \frac{7}{8}$

2.) $2 \div 3\frac{1}{2}$

$\frac{2}{1} \div \frac{7}{2}$

$\frac{2}{1} \cdot \frac{2}{7} = \frac{4}{7}$

Example: Find each quotient. Write in simplest form.

3.) $\frac{7}{8} \div 3\frac{3}{4}$

$\frac{7}{8} \div \frac{15}{4}$

$\frac{7}{8} \cdot \frac{1}{15} = \frac{7}{30}$

4.) $7\frac{1}{3} \div 6$

$\frac{22}{3} \div \frac{6}{1}$

$\frac{22}{3} \cdot \frac{1}{6} = \frac{11}{9}$ or $1\frac{2}{9}$

Example: Find each quotient. Write in simplest form.

5.) $5\frac{1}{4} \div 3\frac{1}{2}$

$\frac{21}{4} \div \frac{7}{2}$

$\frac{21}{4} \cdot \frac{2}{7}$

$\frac{3}{2}$ or $1\frac{1}{2}$

6.) $8 \div 3\frac{1}{2}$

$\frac{8}{1} \div \frac{7}{2}$

$\frac{8}{1} \cdot \frac{2}{7}$

$\frac{16}{7}$ or $2\frac{2}{7}$

7.) $4\frac{2}{5} \div 3\frac{1}{4}$

$\frac{22}{5} \div \frac{13}{4}$

$\frac{22}{5} \cdot \frac{4}{13}$

$\frac{88}{65}$ or $1\frac{23}{65}$