7.4 Dividing Fractions

Reciprocal

- when two numbers are reciprocals, their product is 1

$\frac{1}{3} \cdot \frac{5}{1} = 1 \cdot 1 = 1$

Reciprocal is when we switch the numerator and denominator

What about whole numbers

$\frac{7}{1}$ reciprocal is $\frac{1}{7}$

$\frac{4}{9} \rightarrow \frac{9}{4}$

$\frac{12}{5} \rightarrow \frac{5}{12}$

Dividing Fractions

$\frac{4}{9} \div \frac{1}{2}$

Take reciprocal of Divisor (2nd)

You can not simplify before the reciprocal

Then you multiply

(simplify before multiply)

$\frac{4}{9} \cdot \frac{2}{1}$

$\frac{8}{9}$

$\frac{7}{10} \div \frac{3}{5}$ Reciprocal of (2nd)

$\frac{7}{2\cancel{10}} \cdot \frac{\cancel{5}^{1}}{3}$ Simplify

$\frac{7}{2} \cdot \frac{1}{3}$ multiply

$\frac{7}{6} = 1\frac{1}{6}$ Rename if needed

$\frac{5}{8} \div 2$

$\frac{5}{8} \cdot \frac{1}{2}$

$\frac{5}{16}$

$2 \div \frac{5}{8}$

$\frac{2}{1} \cdot \frac{8}{5}$

$\frac{16}{5} = 3\frac{1}{5}$

$3\frac{7}{8}$ is the reciprocal $3\frac{8}{7}$

Change to Improper

$\frac{31}{8}$ → reciprocal is $\frac{8}{31}$

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2 - 40 even

48, 50