"I Can Divide Fractions and Simplify my Answer into Simplest Terms."

Division Properties with Fractions

Remember from the first day ...

A number • a proper fraction is _____ than the original number.
(less than 1)

A number • an improper fraction or mixed number is _____ than the original number.
(greater than 1)

Without dividing, tell which expression will result in a quotient greater than $\frac{1}{2}$ and which will result in a quotient less than $\frac{1}{2}$. Explain how you know.

Expression 1

$$\frac{1}{2} \div \frac{4}{3}$$

Expression 2

$$\frac{1}{2} \div \frac{3}{4}$$

Expression 3

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

What can you conclude about dividing fractions?

A number ÷ a proper fraction is _____ than the original number.
(less than 1)

A number ÷ an improper fraction or mixed number is _____ than the original number.
(greater than 1)

"I Can Divide Fractions and Simplify my Answer into Simplest Terms."

Division Properties with Fractions

Remember from the first day ...

A number • a proper fraction ($\frac{1}{3}$ $\frac{3}{4}$) is Smaller than the original number.
(less than 1)

$6 \cdot \frac{1}{3} =$
$\frac{6}{1} \cdot \frac{1}{3} = \frac{6}{3} = 2$

A number • an improper fraction ($\frac{15}{4}$) or mixed number ($1\frac{3}{14}$) is bigger than the original number.
(greater than 1)

Without dividing, tell which expression will result in a quotient greater than $\frac{1}{2}$ and which will result in a quotient less than $\frac{1}{2}$. Explain how you know.

÷ Improper ↓

Expression 1

$\frac{1}{2} \div \frac{4}{3}$

$\frac{1}{2} \cdot \frac{3}{4} = \frac{3}{8}$

÷ Proper ↑

Expression 2

$\frac{1}{2} \div \frac{3}{4}$

$\frac{1}{2} \cdot \frac{4}{3} = \frac{4}{6} = \frac{2}{3}$

÷ Mixed # ↓

Expression 3

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

$\frac{1}{2} \div \frac{5}{4} = \frac{1}{2} \cdot \frac{4}{5}^{2} = \frac{2}{5}$

What can you conclude about dividing fractions?

A number ÷ a proper fraction is bigger than the original number.
(less than 1)

A number ÷ an improper fraction or mixed number is smaller than the original number.
(greater than 1)