

2.2 Dividing Fractions

EQ: How can you divide by a fraction?

Reciprocal: "flip the fraction" - A fraction times its reciprocal equals one.

EX:	Fraction	Reciprocal	Multiply
	$\frac{3}{5}$	$\frac{5}{3}$	$\frac{3}{5} \times \frac{5}{3} = \frac{15}{15} = 1$
	$\frac{2}{1}$	$\frac{1}{2}$	$\frac{2}{1} \times \frac{1}{2} = 1$

Example 1: What is the reciprocal?

$$\frac{2}{7} \rightarrow \frac{7}{2}, \quad \frac{13}{17} \rightarrow \frac{17}{13}, \quad 3 \rightarrow \frac{1}{3}$$

Example 2:

1. keep, change, Flip
(stop)
→ multiply
by reciprocal

$$\frac{1}{6} \div \frac{2}{3}$$

$$\frac{1}{6} \times \frac{3}{2}$$

$$\frac{1}{2} \times \frac{1}{2}$$

$$= \frac{1}{4}$$

* You don't need a common denominator

Example 3:

$$\frac{4}{5} \div 2$$

$$\frac{4}{5} \times \frac{1}{2}$$

$$\frac{2}{5} \times \frac{1}{1}$$

$$\begin{array}{l} 2 \times 1 \\ 5 \times 1 \end{array}$$

$$= \frac{2}{5}$$