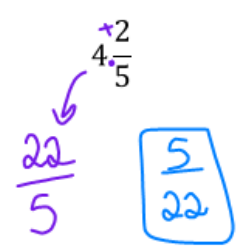




Divide Fractions (5-5)

<i>reciprocal</i>	Decode <i>re·cip·ro·cal</i>
Definition <i>Switch the numerator & denominator</i>	Example <i>$-\frac{2}{3}$ ↷ $\frac{3}{-2}$ or $-\frac{3}{2}$</i>

Example: Write the reciprocal.

I Do	We Do	You Do
$4\frac{2}{5}$ 	$\frac{12}{1}$ 	$\frac{3}{7}$ 

Dividing Fractions	
To divide by a fraction, multiply by the reciprocal.	<p><i>Keep change flip</i></p> $\frac{2}{5} \div \frac{2}{15}$ $\frac{1\cancel{2}}{15} \cdot \frac{15\cancel{2}3}{21} = \frac{3}{1}$ $= 3$

Example 1: Divide the fractions.

I Do	We Do
<p><i>KCF</i></p> $-\frac{6}{7} \div \frac{2}{15}$ $-3\frac{\cancel{6}}{7} \cdot \frac{15}{\cancel{2}} = -\frac{45}{7}$ $= -6\frac{3}{7}$	<p><i>KCF</i></p> $-\frac{9}{14} \div -\frac{7}{15}$ $\frac{-9}{14} \cdot \frac{-15}{7} = \frac{135}{98}$ $= 1\frac{37}{98}$

Example 2: Divide the fractions.

I Do	We Do
$4\frac{2}{5} \div 12$ $\frac{22}{5} \div \frac{12}{1}$ $= \frac{22}{5} \cdot \frac{1}{12} = \frac{11}{30}$ $\frac{22}{60} \div 2 = \frac{11}{30}$	$3\frac{1}{7} \div -\frac{13}{14}$ $\frac{-22}{7} \div \frac{-13}{14}$ $\frac{-22}{14} \cdot \frac{-14}{13} = \frac{44}{13} = 3\frac{5}{13}$

I Do	We Do
$-5\frac{13}{5} \div 1\frac{6}{15}$ $\frac{-28}{5} \div \frac{21}{15}$ $-4 \cdot \frac{28}{5} \cdot \frac{15}{21} = -12$ $= -4$	$-6\frac{1}{4} \div 1\frac{1}{14}$ $\frac{-25}{4} \div \frac{15}{14}$ $-5 \cdot \frac{25}{4} \cdot \frac{14}{15} = -35$ $= -5\frac{5}{6}$

Example 3: Use what you know about fractions to divide.

I Do

You have 24 pounds of feed for the cattle. If you have to split the feed
~~between~~ $3\frac{1}{2}$ barns, how much can you give to each barn?
 among

$$24 \div 3\frac{1}{2}$$

$$\begin{array}{ccc} K & C & F \\ \frac{24}{1} & \div & \frac{7}{2} \end{array}$$

$$\frac{24}{1} \cdot \frac{2}{7} = \frac{48}{7}$$

$6\frac{6}{7}$ pounds of feed
 or
 lbs. of feed
 or
 # of feed

Example 3: Use what you know about fractions to divide.

I Do

You have 30 pounds of sunflower seeds. If you want to eat the seeds over $2\frac{1}{2}$ days, how much can you eat per day?

$$30 \div 2\frac{1}{2}$$

$$\frac{30}{1} \div \frac{5}{2}$$

$$\frac{30}{1} \cdot \frac{2}{5} = \frac{60}{5} = 12 \text{ lbs.}$$

$$6 \frac{30}{1} \cdot \frac{2}{5} = \frac{12}{1} = 12 \text{ lbs.}$$