Dividing Fractions — Reciprocal

Multiply by the reciprocal
copy dot flip
copy change change

* reciprocal means to flip the fraction upside down

ex. 1 $\frac{2}{3} \rightarrow \frac{3}{2}$ reciprocal

ex. 2 $4\frac{+2}{\times 5} \rightarrow \frac{22}{5} \rightarrow \frac{5}{22}$ reciprocal

How it's used

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

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

copy dot flip

$\frac{3}{4} \cdot \frac{3}{2}$

$\frac{9}{8} \rightarrow 8\overline{)9}$ $\begin{array}{r} 1 \\ -8 \\ \hline 1 \end{array}$

$1\frac{1}{8}$

ex. 2 $4\frac{+1}{\times 3} \div \frac{7}{8}$

$\frac{13}{3} \div \frac{7}{8}$

copy dot flip

$\frac{13}{3} \cdot \frac{8}{7}$

$\frac{104}{21} \rightarrow 21\overline{)104}$ $\begin{array}{r} 4 \\ -84 \\ \hline 20 \end{array}$

$4\frac{20}{21}$

Dividing Fractions

– multiply by the reciprocal

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

$\frac{6}{8} \div \frac{2}{3}$

copy dot flip

$\frac{6}{8} \cdot \frac{3}{2}$

① multiply by the reciprocal "copy dot flip"

$\frac{6}{8} \cdot \frac{3}{2} = \frac{18}{16}$ ② multiply straight across

$\frac{18}{16} \div \frac{2}{2} = \frac{9}{8}$ ③ simplify

$\frac{9}{8}$ $8\overline{)9}$ $1\frac{1}{8}$ ④ change improper fraction to mixed # by dividing

-8

1

$1\frac{1}{8}$ ⑤ simplify