

Dividing Mixed Numbers

MN \rightarrow IF \rightarrow MN

$\begin{array}{cc} + & - \\ \times & \div \\ \hline \end{array}$
reciprocal

ex. 1

$$8\frac{7}{8} \div 2\frac{1}{3}$$

$$8\frac{7}{8} \div 2\frac{1}{3}$$

$$\frac{71}{8} \div \frac{7}{3}$$

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copy dot flip

$$\frac{71}{8} \cdot \frac{3}{7}$$

$$\frac{71}{8} \cdot \frac{3}{7} = \frac{213}{56}$$

$$\frac{213}{56} \rightarrow 56 \overline{)213} \\ \underline{-168} \\ 45$$

$$3\frac{45}{56}$$

① change mixed #'s to improper fractions

② multiply by the reciprocal

③ multiply straight across

④ simplify?

⑤ change improper fraction to mixed # by dividing

⑥ simplify

ex. 2 $6\frac{3}{4} \div 3$

$$6\frac{3}{4} \div \frac{3}{1}$$

$$\begin{array}{r} +3 \\ 6\frac{3}{4} \div \frac{3}{1} \\ \times 4 \end{array}$$

$$\frac{27}{4} \div \frac{3}{1}$$

copy dot flip

$$\frac{27}{4} \cdot \frac{1}{3}$$

$$\frac{27}{4} \cdot \frac{1}{3} = \frac{27}{12}$$

$$\frac{27}{12} \div \frac{3}{3} = \frac{9}{4}$$

$$\frac{9}{4} \begin{array}{r} 2 \\ 4 \overline{)9} \\ -8 \\ \hline 1 \end{array}$$

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

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

① change whole # to improper fraction by putting a 1 underneath

② change mixed # to improper fraction by dividing

③ multiply the reciprocal "copy dot flip"

④ multiply straight across

⑤ simplify

⑥ change improper fraction to mixed # by dividing

⑦ simplify