

DIVIDING FRACTIONS

$$\frac{3}{4} \div \frac{1}{8} = \frac{3}{4} \times \frac{8}{1} = \frac{24}{4}$$

STEP 1: Find the reciprocal/inverse of the second fraction.

(**FLIP** the 2nd fraction) $\frac{1}{8} = \frac{8}{1}$

STEP 2: Then you multiply the numerator times numerator (3 x 8) and denominator times the denominator (4 x 1).

STEP 3: Simplify your improper fraction. $\frac{24}{4} = 6$

Divide your denominator (4) into your numerator (24). You will get a whole number (6). In this case, there is no remainder so, no numerator or denominator in your answer.

DIVIDING MIXED FRACTIONS

The diagram illustrates the conversion of mixed numbers to improper fractions and their multiplication. At the top, the problem is $1\frac{3}{4} \times 2\frac{1}{2} = ?$. Red arrows point from the whole numbers 1 and 2 down to the numerators 7 and 5 of the improper fractions $\frac{7}{4}$ and $\frac{5}{2}$ respectively. To the right, two equations show the conversion process: $1 \times 4 + 3 = 7$ and $2 \times 2 + 1 = 5$. Below, the multiplication is shown: $\frac{7}{4} \times \frac{5}{2} = \frac{35}{8} = 4\frac{3}{8}$.

$$1\frac{3}{4} \times 2\frac{1}{2} = ?$$
$$\frac{7}{4} \times \frac{5}{2} = \frac{35}{8} = 4\frac{3}{8}$$

$1 \times 4 + 3 = 7$
 $2 \times 2 + 1 = 5$

STEP 1: Turn each mixed number into an improper fraction.

****Multiply the whole # by the denominator and add the numerator.
Denominator remains the same****

STEP 2: Multiply your new fractions. (Same as above)

STEP 3: Simplify your improper fraction back to a mixed number.

****Divide your numerator by the denominator. This is your new whole #.
Your remainder is your new numerator and your denominator remains the same.** (Reduce your new fraction if possible)**