

## Add Fractions

\* Common denominator

$$\frac{3}{8} + \frac{4}{8} = \frac{7}{8}$$

\* Simplify

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

## Subtract Fractions

\* Common denominator

$$\frac{10}{12} - \frac{2 \times 2}{6 \times 2}$$

$$\frac{10}{12} - \frac{4}{12} = \frac{6}{12}$$

\* Simplify  $\frac{6 \div 6}{12 \div 6} = \frac{1}{2}$

## Multiply Fractions

\* multiply straight across

$$\frac{3}{4} \times \frac{1}{3} = \frac{3}{12}$$

\* Simplify

$$\frac{3 \div 3}{12 \div 3} = \frac{1}{4}$$

## Divide Fractions

Keep the first fraction

Change  $\div$  to  $\times$

Flip the second fraction

$$\frac{4}{9} \div \frac{1}{5}$$

\* Simplify

$$\frac{4}{9} \times \frac{5}{1} = \frac{20}{9} \times 2 = 18$$
$$= 2 \frac{2}{9}$$

reciprocal



## Add Decimals

\* line up decimal points

$$\begin{array}{r} \boxed{\text{ex}} \quad 76.931 \\ + 42.019 \\ \hline 118.950 \end{array}$$

## Subtract Decimals

\* line up decimal points

$$\begin{array}{r} \boxed{\text{ex}} \quad \overset{4}{5} \overset{10}{0} 2. \overset{6}{7} \overset{14}{14} \\ - 281.36 \\ \hline 221.38 \end{array}$$

\* to check: add up

## Multiply Decimals

\* count hops to move decimal

$$\begin{array}{r} \boxed{\text{ex}} \quad \overset{1}{3}.61 \\ \times \overset{2}{0}.39 \\ \hline 3249 \\ 10830 \\ \hline 1.4079 \end{array}$$

## Divide Decimals

\* no decimals in my divisor

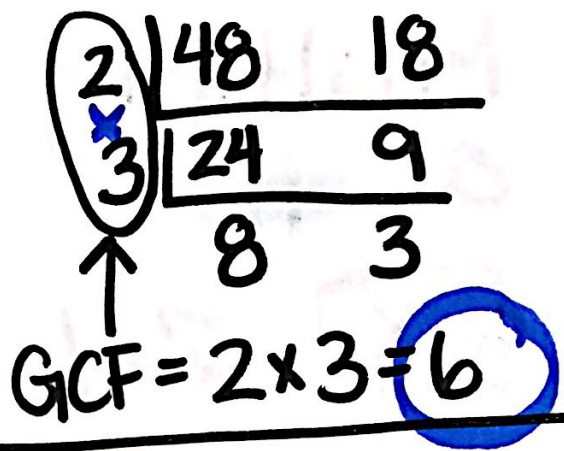
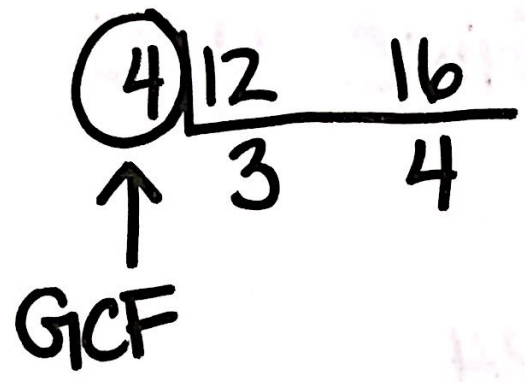
$$\begin{array}{r} \text{divisor} \overline{) \text{dividend}} \\ \boxed{\text{ex}} \quad \begin{array}{r} 243.0 \\ 2 \overline{) 48.6} \\ \underline{-4} \phantom{0} \phantom{0} \\ 08 \phantom{0} \\ \underline{-8} \phantom{0} \\ 06 \\ \underline{-6} \\ 0 \end{array} \\ = 243 \end{array}$$



# \* GCF - Greatest Common Factor

12 and 16

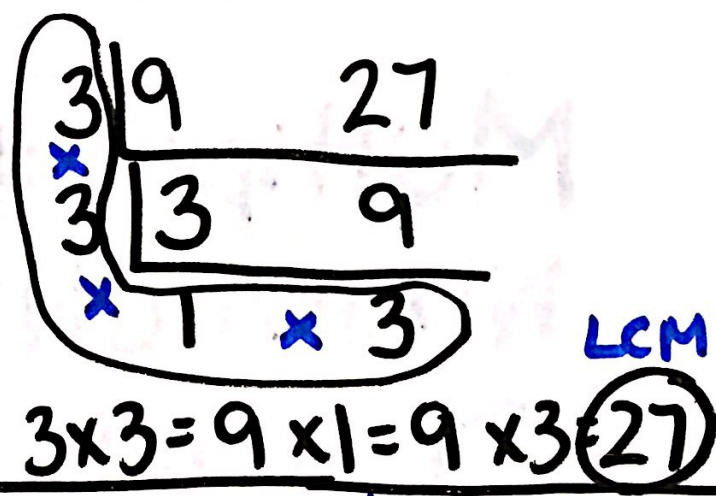
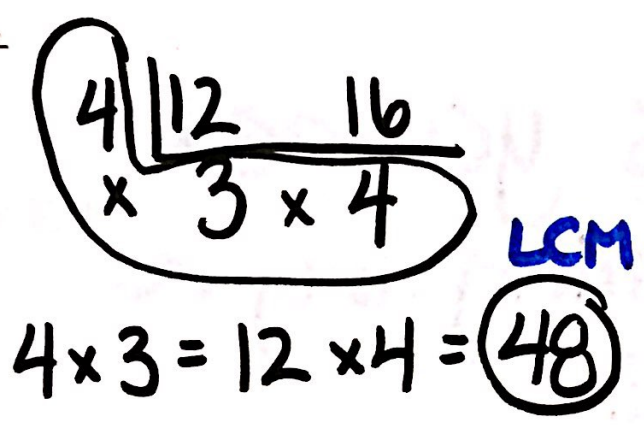
48 and 18



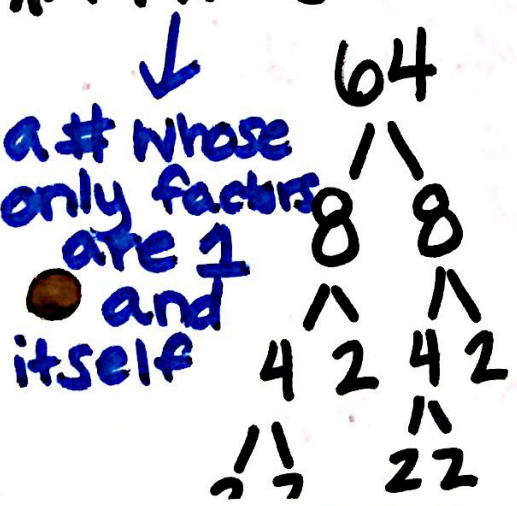
# \* LCM - Least Common Multiple

12 and 16

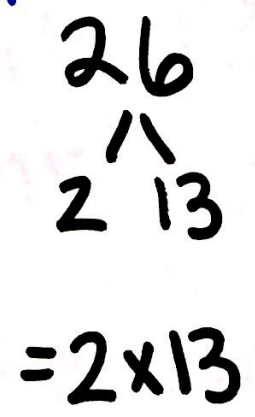
9 and 27



# \* Prime Factorization - breaking a # down to only prime factors



$= 2 \times 2 \times 2 \times 2 \times 2 \times 2$



Factor: the #s that  
Multiply to Give you  
a #

ex 24

$1 \times 24$   
 $2 \times 12$   
 $3 \times 8$   
 $4 \times 6$

Multiple: #s you get  
when multiplying by a  
constant #

ex 5, 10, 15, 20, 25, 30...  
↳ Multiples of 5

→ value that doesn't change