Dimensional Analysis

(Old) Multiplying Fractions

∙ Cross reducing - means finding a common factor between the numerator and the denominator and crossing them out to simplify using the identative property.

∙ Cross multiply

$\frac{5}{6}$ ∙ $\frac{2}{3}$ = $\frac{5∙2}{6∙3}$ = $\frac{10}{18}$ = $\frac{5}{9}$ or $\frac{5}{6}$ ∙ $\frac{2}{3}$ = $\frac{5}{3}$ ∙ $\frac{1}{3}$ = $\frac{5}{9}$

Distributive property - GCF or CF goes outside xz –xy = x(z – y)

Additive Inverse – The quantity you add to cancel out to get a sum of zero.

(New)

Dimensional Analysis - The process of converting one unit to another unit. This process involves using “known” rates and treating these rates as ratios (Ex: 60 minutes = 1 hour)

3 hours to seconds

$\frac{3 hours}{1}$ ∙ $\frac{60 minutes}{1 hour}$ ∙ $\frac{60 seconds}{1 minute}$ = $\frac{10,800 seconds}{1}$ = 10,800 seconds

6 mph to feet per minute

$\frac{6 miles}{1 hour}$ ∙ $\frac{1 hour}{60 minutes}$ ∙ $\frac{5280 feet}{1 mile}$ = $\frac{1 mile}{1 hour}$ ∙ $\frac{1 hour}{10 minutes}$ ∙ $\frac{5280 feet}{1 mile}$ = $\frac{528 feet}{1 minute}$ = 528 feet per minute