X, Y can be: atoms, ions, molecules, things...

grams of X

molar mass, g/mol

g/mL

to

density,

g/mL

volue

grams of Y

density, g/mL

moles of X

ratio from formula or balanced reaction

molar mass, g/mol

Avogadro's #, 6.022x10^{23}/mol

number of X

ratio from formula or balanced reaction

moles of Y

moles of Y

number of Y