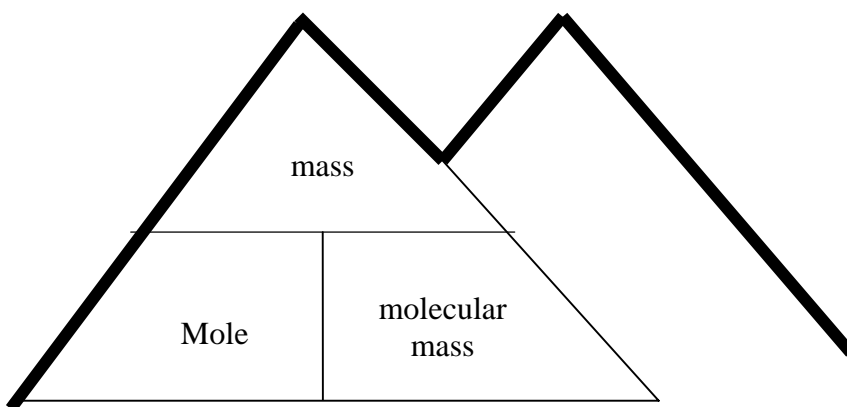


Don't Make a Mountain Out of a Mole Hill!

Calculations using moles can be a confusing task but here's a way to help remember:

Mole = mass/molecular mass
(Mole equals mass over molecular mass)

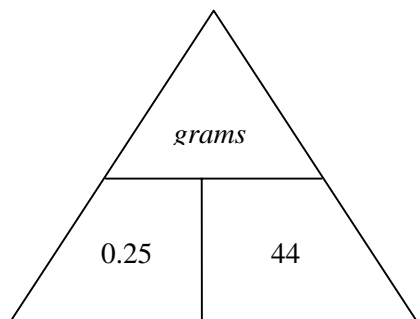


From this "triangular" relationship, two other important relationships can be developed:

mass = Mole * molecular mass
molecular mass = mass/Mole

The unit of the molecular mass is the "a.m.u." (atomic mass unit). It is equivalent to grams/mole.
 So, 20 amu = 20 grams/mole.

Using the Mole hill mountain, convert 0.25 mole CO₂ to grams.



The molecular mass of CO₂ is 44.0 amu.

1 x C (12.0 amu) 12

2 x O (16.0 amu) 32

44 amu

grams = Mole * molecular mass

= (0.25 mole) (44 amu)

= 11 grams

Mole quiz score: _____

Student name: _____

2002-03 MASTER TEACHER JOY M. BARNES-JOHNSON