By test time I should be able to...

1. -understand the concept of a mole as a counting unit with 6.022×10^{23} particles and understand the mole quantity is quite enormous.

2. -calculate the molar mass of a compound using atomic weights from the periodic table.

3. -understand the difference between molar mass and atomic mass (weight). Molar mass has units of grams and is the mass of one mole of particles. Atomic mass has units of amu or "u" and is the mass of one particle relative to Carbon-12.

4. -use the mole concept to perform the following conversions:
   a. grams to moles
   b. grams to particles
   c. moles to grams
   d. particles to grams
   e. grams to liters (for gases at STP)
   f. liters to grams (for gases at STP)
   g. liters to moles (for gases at STP)
   h. moles to liters (for gases at STP)
   i. liters to particles (for gases at STP)
   j. particles to liters (for gases at STP)
   k. moles to particles
   l. particles to moles

The Mole

6.022×10^{23}