The Mole and Molar Ratios

Target: Today I will be able to convert between number of molecules and number of moles. **Pg. 115**

Don’t forget!

- Tomorrow is the last day lab corrections can be submitted.
- If you STILL have not turned in the lab, tomorrow is the last day.
- If you were absent either day that we did the lab, see me.

Homework Corrections

- Pass your Homework to your desk mate.
- Correct your desk mate's homework:
  - #1-11, worth 3 points each:
    - 1 point for correct final unit
    - 0.5 points for "Given" and "Find"
    - 0.5 for using "picket fence method"
    - 1 point for correct final quantity (number)
- Put the points out of total possible at top (#points/33) at top of page
- Write CB: <Your Name> and turn in.

The Mole concept:

- A mole (mol) is a unit of measurement.
- Video
- An actual Video
- A mole of ANYTHING is 6.02×10^{23}

Mole Practice:

- Suzy has a mole of grains of sand. How many grains of sand does she have?
  - 6.02×10^{23} grains of sand
- How many hydrogen atoms are in one mole of hydrogen atoms?
  - 6.02×10^{23} hydrogen atoms
- How may water molecules are in a mole of water molecules?
  - 6.02×10^{23} water molecules

Converting between molecules and moles

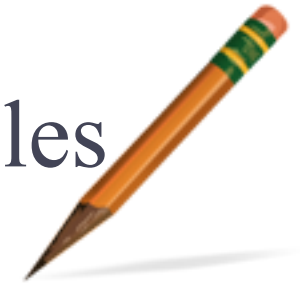
- How many molecules of water are in the following reaction:

$$2H_2 + O_2 \rightarrow 2H_2O$$

Given:
2 mol water
1 mol anything = 6.02×10^{23} anything
1 mol water molecules = 6.02×10^{23} water molecules

Find:
_____molecules of water

Converting between molecules and moles



- How many molecules of H_2 are in the following reaction:

$$N_2 + 3H_2 \rightarrow 2NH_3$$

Given:
3 mol H_2
1 mol anything = 6.02×10^{23} anything
1 mol H_2 molecules = 6.02×10^{23} H_2 molecules

Find:
_____molecules of H_2

Homework

- ~~SQ3R pg. 82-87 including sample problems.~~ **~~Pg. 117~~** ~~Due tomorrow, 1/31~~

- ~~How BIG is a mole assignment. Be prepared to share in class on Monday, Feb 3.~~ **~~Pg. 116~~**

- Keep working on Science in Social Media Rough Draft. Due tomorrow, 1/31