**PV = nRT: The Ideal Gas Law**

PV = nRT

P stands for pressure. V stands for volume. T stands for the temperature in Kelvins. n stands for moles. And R is called the gas constant. Sometimes it is referred to as the universal gas constant. If you wind up taking enough chemistry, you will see it showing up over and over and over.

**The Numerical Value for R**

R's value can be determined many ways. The value we will use for our class is:

  R = 0.08206 L atm / mol K

This is not the only value of R that can exist. It depends on which units you select..

**Example #1** - A sample of dry gas weighing 2.1025 grams is found to occupy 2.850 L at 22.0°C and 740.0 mmHg. How many moles of the gas are present?

Notice that the units for pressure MUST be in atm., so the 740.0 mm Hg must be converted first.

740.0 mm Hg ÷ 760.0 mm Hg/atm = 0.9737 atm

However, the unrounded-off value should be used in the calculation just below.

Now, plug into the equation:

(0.9737 atm) (2.850 L) = (n) (0.08206 L atm / mol K) (295.0 K)

and solve for n.