$K = °C + 273$

T = Avg. ~~Kinetic~~ energy

$KE = \frac{1}{2} m v^2$ v = velocity

Lussac's law - pressure and temp are directly proportional.

$\frac{P_1}{T_1} \propto \frac{T_1}{T_1}$

$\frac{P_1}{T_1} = \frac{P_2}{T_2}$

$\frac{P_1}{T_1} = ?$

Charle's Law

$$\frac{V_1}{T_1} = \frac{V_2}{T_2}$$

Intermolecular forces

Inter — Between

forces — attraction

faster particles move
the less Imf's

Boyle's Law

- inverse
- $P_1 V_1 = P_2 V_2$

kPa mL kPa mL

Avogadro's Law

$V \propto n$ (moles)

$$\frac{V_1}{n_1} = \frac{V_2}{n_2}$$

Ideal Gas Law

$$PV = nRT$$

- P: atm
- V: Liters
- n: moles
- R: 0.0821 $\frac{L \cdot atm}{mol \cdot K}$
- T: Kelvin

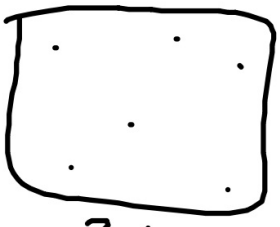
Ideal Gas = Zero IMF's

To make a gas more ideal

1. High T
2. High V / Low P

Kinetic Molecular Theory (KMT)

1. zero IMF's
2. gas particles have zero volume



3. Particles are in constant, random motion
4. When particles collide w/ one another no E is lost (elastic collision)

Pressure units

1 atm = 760 mm Hg = 760 torr = 101.3 kPa

NMSI ~~Problems~~ Exercises

#1-3

#6

#8-11