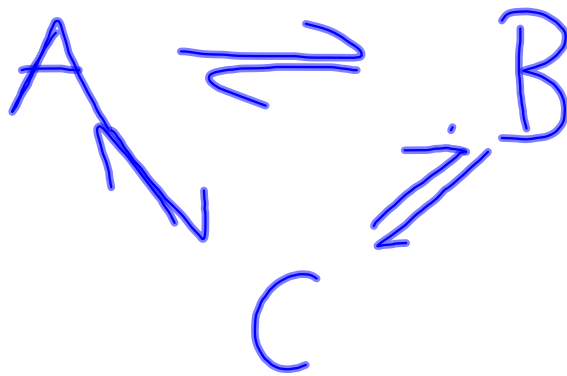


Zeroth Law of Thermo
Transitive Law



Heat :

Temperature : a measure
of kinetic
energy

Gases:

Ideal

$$PV = nRT$$

Real

van der Waals

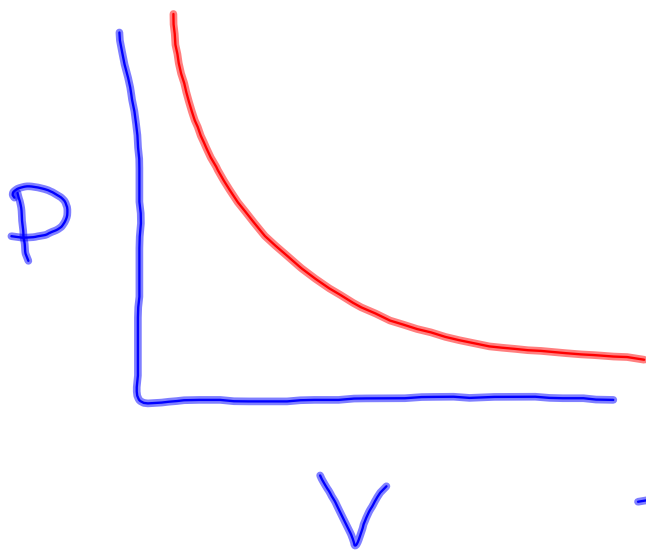
$$P = \frac{nRT}{V-nb} - \frac{an^2}{V^2}$$

$$\text{Pressure : } \frac{\text{Force}}{\text{Area}}$$

Boyles : $P_1 V_1 = P_2 V_2$

$$PV = k$$

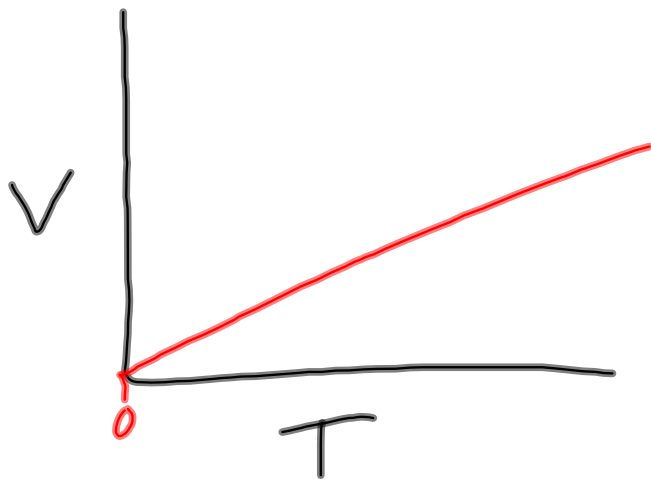
$$P \propto \frac{1}{V}$$



T is fixed

Charles

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



$$V \propto T$$

$$V = kT$$

$$y = mx + b$$

Avogadro's Law

$$V \propto n$$

Combined Gas Law

$$\frac{P_1 V_1}{T_1} = \frac{P_2 V_1}{T_2}$$
$$nR \quad nR$$

Pressure : $\frac{F}{A}$

unit :

$$\frac{N}{m^2} \rightarrow \text{Pascal}$$

psi

$$1 \text{ atm} = 760 \text{ torr}$$

atm

$$1 \text{ atm} = 101325 \text{ Pa}$$

Torr mmHg

$$1 \text{ bar} = 100000 \text{ Pa}$$

Temperature:

K

°C

°F

°R

Rankin