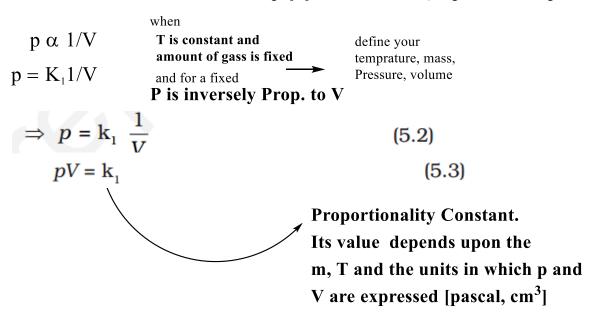
Boyle's Law (Pressure-Volume Relationship)

amount of gss[m]= number of moles n) of gas = volume of gass



If a fixed amount of gas at constant temperature T occupying volume V_1 at pressure p1 undergoes expansion, so that volume becomes V_2 and pressure becomes p_2 , then according to Boyle's law

$$p_{1}V_{1} = p_{2}V_{2} = \text{constant}$$
 (5.4)

$$\Rightarrow \frac{p_1}{p_2} = \frac{V_2}{V_1} \tag{5.5}$$

Let x and y be two proportional quantities. Let k be a constant.

$$y = kx$$

$$x \alpha y$$

$$x = \kappa y$$

$$x/y = \kappa$$

