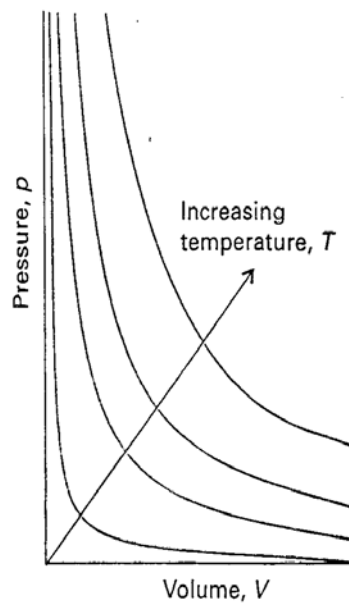


Boyle 1661

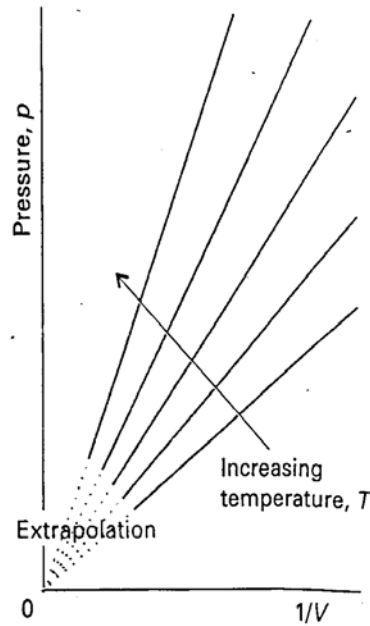
Boyle'sches Gesetz: $pV = \text{const}$

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

($T = \text{const.}$)

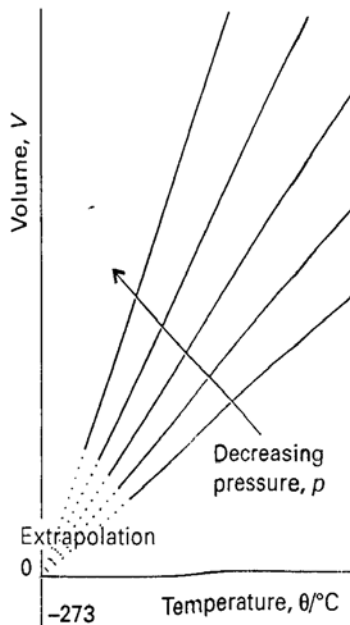


1.5 The pressure-volume dependence of a fixed amount of perfect gas at different temperatures. Each curve is a hyperbola ($pV = \text{constant}$) and is called an isotherm.

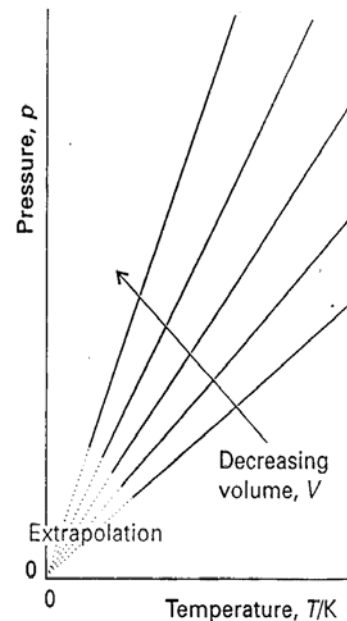


1.6 Straight lines are obtained when the pressure is plotted against $1/V$.

Charles' Gesetz: $V = \text{const} \times (\theta + 273^\circ\text{C})$ ($p = \text{const}$)



1.7 The variation of the volume of a fixed amount of gas with the temperature constant. Note that in each case they extrapolate to zero volume at -273.15°C .



1.8 The pressure also varies linearly with the temperature, and extrapolates to zero at $T = 0$ (-273.15°C).