

Conversion Factors

atmospheric pressure $1 \text{ atm} = 101.3 \text{ kPa}$
 $1 \text{ atm} = 760.0 \text{ torr} \equiv 760.0 \text{ mm Hg at } 0^\circ\text{C}$

gravitational acceleration $g = 9.81 \frac{\text{m}}{\text{s}^2}$

density of mercury $\rho_{\text{Hg}} = 13,600 \frac{\text{kg}}{\text{m}^3}$

ideal gas constant $R = 0.0821 \frac{\ell \cdot \text{atm}}{\text{mol} \cdot \text{K}}$

$R = 8.31 \frac{\ell \cdot \text{kPa}}{\text{mol} \cdot \text{K}} \equiv 8.31 \frac{\text{J}}{\text{mol} \cdot \text{K}}$

$R = 62.4 \frac{\ell \cdot \text{torr}}{\text{mol} \cdot \text{K}}$