Exercise S11

vrijdag 29 mei 2020 11:28

$$E = mgh$$

$$\downarrow$$

$$m = m_{N_2}$$

$$\frac{N_j}{g_j} = \frac{N}{Z} \exp\left(-\frac{E_j}{k_B T}\right)$$

$$\frac{N_j}{N} = \frac{g_j}{Z} \exp\left(\frac{-E_j}{k_B T}\right)$$

$$p_j = p_0 \exp\left(\frac{-E_j}{k_B T}\right)$$

$$\frac{p(h)}{p(0)} = \exp\left(\frac{-mgh}{k_B T}\right)$$

height determines state

$$pV = N k_B T$$

$p \propto \rho \propto p$! ideal gas

what is ρ ?

$$\frac{p(h)}{p(0)} = \exp\left(\frac{-mgh}{k_B T}\right)$$