$ORIGIN := 1$

$A := \begin{pmatrix} 15.3939 \\ 14.1577 \end{pmatrix}$ $B := \begin{pmatrix} 2971.37 \\ 2754.35 \end{pmatrix}$ $C := \begin{pmatrix} -61.940 \\ -59.834 \end{pmatrix}$

$P := 101.3$ $R := 8.314$

$x := \begin{pmatrix} 0.259 \\ 0.741 \end{pmatrix}$

$$\gamma(T) := \left| \begin{array}{l} g_{12} \leftarrow 2255.746 \\ g_{21} \leftarrow 935.446 \\ \alpha \leftarrow 0.3 \\ \tau_{12} \leftarrow \dfrac{g_{12}}{R \cdot T} \\ \tau_{21} \leftarrow \dfrac{g_{21}}{R \cdot T} \\ G_{12} \leftarrow \exp(-\alpha \cdot \tau_{12}) \\ G_{21} \leftarrow \exp(-\alpha \cdot \tau_{21}) \\ \gamma_1 \leftarrow \exp\left[(x_2)^2 \cdot \left[\tau_{21} \cdot \left(\dfrac{G_{21}}{x_1 + x_2 \cdot G_{21}}\right)^2 + \dfrac{\tau_{12} \cdot G_{12}}{(x_2 + G_{12} \cdot x_1)^2}\right]\right] \\ \gamma_2 \leftarrow \exp\left[(x_1)^2 \cdot \left[\tau_{12} \cdot \left(\dfrac{G_{12}}{x_2 + x_1 \cdot G_{12}}\right)^2 + \dfrac{\tau_{21} \cdot G_{21}}{(x_1 + G_{21} \cdot x_2)^2}\right]\right] \\ \begin{pmatrix} \gamma_1 \\ \gamma_2 \end{pmatrix} \end{array} \right.$$

$$T := \sum_{i=1}^{2} \left[x_i \cdot \left(\frac{B_i}{A_i - \ln(P)} - C_i\right)\right] = 345.744$$

$i := 1 .. 2$

$$y_i := \frac{x_i \cdot \exp\left(A_i - \dfrac{B_i}{C_i + T}\right) \cdot \gamma(T)_i}{P}$$

Given

$$P \cdot y_1 = \exp\left(A_1 - \frac{B_1}{C_1 + T}\right) \cdot x_1 \cdot \gamma(T)_1$$

$$P \cdot y_2 = \exp\left(A_2 - \frac{B_2}{C_2 + T}\right) \cdot x_2 \cdot \gamma(T)_2$$

$$y_1 + y_2 = 1$$

$$\begin{pmatrix} y \\ T \end{pmatrix} := \text{Find}(y, T)$$

$$y = \begin{pmatrix} 0.456 \\ 0.544 \end{pmatrix} \qquad T = 337.786$$