

ORIGIN := 1

T := 373

$$B := \begin{pmatrix} -422 & -650 \\ -650 & -103.1 \end{pmatrix} \quad y := \begin{pmatrix} 0.35 \\ 0.65 \end{pmatrix} \quad R := 83.14$$

$$B_{\text{mix}} := \sum_{i=1}^2 \sum_{j=1}^2 (y_i \cdot y_j \cdot B_{i,j}) = -391.005$$

$$\phi(P) := \begin{cases} \text{for } i \in 1..2 \\ \phi_i \leftarrow \exp \left[\frac{P}{R \cdot T} \cdot \left[2 \sum_{j=1}^2 (y_j \cdot B_{i,j}) \right] - B_{\text{mix}} \right] \\ \phi \end{cases}$$

$$\phi(1) = \begin{pmatrix} 0.976 \\ 0.994 \end{pmatrix}$$

$$\phi(10) = \begin{pmatrix} 0.785 \\ 0.938 \end{pmatrix}$$

$$\phi(15) = \begin{pmatrix} 0.696 \\ 0.909 \end{pmatrix}$$