Continue Matlab example to solve 1-D diffusion over variable area.

**Boundary Conditions**

**Three Types**

- **Type 1 → specified \( T \)**
- **Type 2 → specified gradient \( q' \)**
- **Type 3 → relation between \( T \) and \( \frac{dT}{dy} \)**

Given \( q' \)

**Type 1 Condition → how to specify?**

Implement?

After Assembly we have \([A]\{T\} = \{0\}\)

If \( T(0x=0) = T_0 \), suppose this node 1

\[ \begin{align*}
0 & \quad 2 \quad 3 \\
1 & & \\
\end{align*} \]

Node 1 corresponds to first row in matrix

**Change the Eqn on Row 1 to**

- \( T_1 = T_0 \)
- \( A(1,1) = 1 \)
- \( A(1,j) = 0 \quad j = 2, \ldots, \text{ele}+1 \)
- \( \text{rhs}(1) = T_0 \)