

Problem 10.1

Q: $Q = ?$

Solution

$$Q = \begin{bmatrix} 0 & 1 & 2 & 3 & \cdots & n-1 & n \\ -\lambda_0 & \lambda_0 & & & & & \\ \mu_1 & -(\mu_1 + \lambda_1) & \lambda_1 & & & & \\ & \mu_2 & -(\mu_2 + \lambda_2) & \lambda_2 & & & \\ & & & \ddots & & & \\ & & & & \mu_{n-1} & -(\mu_{n-1} + \lambda_{n-1}) & \lambda_{n-1} \\ & & & & & \mu_n & -\mu_n \end{bmatrix}$$