

For every $1 \leq i \leq n-1$, denote by c_i the constraint equation $[\lambda_i e_{i,i+1}, \mu_{i+1} e_{i+1,i+2}] - [\lambda_{i+1} e_{i+1,i+2}, \mu_i e_{i,i+1}] = (\lambda_i \mu_{i+1} - \lambda_{i+1} \mu_i) e_{i,i+2} = 0$. We observe that for each $2 \leq j \leq n-2$, μ_j is obviously determined by the two constraints c_{j-1} and c_j , which means that we have several options for $\lambda_{j-1}, \lambda_j, \lambda_{j+1}$. We look at the two equations:

$$c_{j-1} = (\lambda_{j-1} \mu_j - \lambda_j \mu_{j-1}) e_{j-1,j+1} = 0$$

$$c_j = (\lambda_j \mu_{j+1} - \lambda_{j+1} \mu_j) e_{j,j+2} = 0$$

Obviously, if $\lambda_{j-1} = \lambda_j = \lambda_{j+1} = 0$, then both c_{j-1} and c_j are invalid constraints, which means that μ_j can assume any value, we usually denote this by $\mu_j = *$. Suppose that we have only two zeros, then if $\lambda_{j-1} = \lambda_j = 0$ and $\lambda_{j+1} \neq 0$ or if $\lambda_j = \lambda_{j+1} = 0$ and $\lambda_{j-1} \neq 0$, then we must also have that $\lambda_{j+1} \mu_j = 0$ or $\lambda_{j-1} \mu_j = 0$, respectively, which means that $\mu_j = 0$. On the other hand, if $\lambda_{j-1} = \lambda_{j+1} = 0$ and $\lambda_j \neq 0$, then we must have $\lambda_j \mu_{j-1} = \lambda_j \mu_{j+1} = 0$, which means that $\mu_{j-1} = \mu_{j+1} = 0$, and since μ_j depends only on c_{j-1} and c_j , we have that $\mu_j = *$. Suppose that only one of the three λ coefficients is zero, then if $\lambda_{j-1} = 0$, we must have that $\mu_{j-1} = 0$, and $\mu_{j+1} = \frac{\lambda_{j+1}}{\lambda_j} \mu_j$. If $\lambda_{j+1} = 0$, then we must have that $\lambda_{j-1} \mu_j = \lambda_{j+1} \mu_j = 0$, which means that $\mu_j = 0$. If $\lambda_{j+1} = 0$, then we must have that $\mu_{j+1} = 0$, and $\mu_j = \frac{\lambda_j}{\lambda_{j-1}} \mu_{j-1}$. If the three λ coefficients are non-zero, then we must have that $\mu_j = \frac{\lambda_j}{\lambda_{j-1}} \mu_{j-1}$, and $\mu_{j+1} = \frac{\lambda_{j+1}}{\lambda_j} \mu_j = \frac{\lambda_{j+1}}{\lambda_j} \frac{\lambda_j}{\lambda_{j-1}} \mu_{j-1} = \frac{\lambda_{j+1}}{\lambda_{j-1}} \mu_{j-1}$.