Podstawianie wsteczne → rozwiązanie

$$x_n = \frac{g_n}{\beta_n}$$

$$x_j = \frac{(g_j - c_j x_{j+1})}{\beta_j}, \qquad j = n-1, \ldots, 1$$

to było bez "pivotingu"

$$A = \begin{bmatrix} 2 & 1 & 0 & 0 & 0 \\ 1 & 2 & 1 & 0 & 0 \\ 0 & 1 & 2 & 1 & 0 \\ 0 & 0 & 1 & 2 & 1 \\ 0 & 0 & 0 & 1 & 2 \end{bmatrix}$$

$$a_j = 1, \qquad b_j = 2, \qquad c_j = 1, \quad \forall \quad j$$

$$\beta_1 = 2$$

$$\alpha_j = \frac{1}{\beta_{j-1}}, \qquad \beta_j = 2 - \alpha_j, \qquad j = 2,3,4,5$$

$$A = LU = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ \frac{1}{2} & 1 & 0 & 0 & 0 \\ 0 & \frac{2}{3} & 1 & 0 & 0 \\ 0 & 0 & \frac{3}{4} & 1 & 0 \\ 0 & 0 & 0 & \frac{4}{5} & 1 \end{bmatrix} \begin{bmatrix} 2 & 1 & 0 & 0 & 0 \\ 0 & \frac{3}{2} & 1 & 0 & 0 \\ 0 & 0 & \frac{4}{3} & 1 & 0 \\ 0 & 0 & 0 & \frac{5}{4} & 1 \\ 0 & 0 & 0 & 0 & \frac{6}{5} \end{bmatrix}$$