$$\underbrace{\begin{bmatrix} b_1 & c_1 & 0 & \cdots & 0 \\ a_2 & b_2 & c_2 & & \vdots \\ 0 & \ddots & \ddots & \ddots & 0 \\ \vdots & & a_{n-1} & b_{n-1} & c_{n-1} \\ 0 & \cdots & 0 & a_n & b_n \end{bmatrix}}_{\text{KNOWN}} = \underbrace{\begin{bmatrix} 1 & 0 & 0 & \cdots & 0 \\ l_2 & 1 & 0 & \cdots & 0 \\ 0 & l_3 & 1 & & \vdots \\ \vdots & & \ddots & \ddots & 0 \\ 0 & \cdots & 0 & l_n & 1 \end{bmatrix} \begin{bmatrix} v_1 & c_1 & 0 & \cdots & 0 \\ 0 & v_2 & c_2 & & \vdots \\ \vdots & & \ddots & \ddots & 0 \\ & & & v_{n-1} & c_{n-1} \\ 0 & \cdots & & 0 & v_n \end{bmatrix}}_{\text{UNKNOWN}}$$

$b_1 = v_1$

$a_2 = l_2 v_1$ $\quad a_k = l_k v_{k-1}$

$b_2 = l_2 c_1 + v_2$ $\quad b_k = l_k c_{k-1} + v_k$

$b_1 = v_1$ {v_1 IS KNOWN INITIALLY}

$k = 2, \ldots, n$

$l_k = \dfrac{a_k}{v_{k-1}}$, {IF WE KNOW v_1, WE CAN FIND l_2}

$v_k = b_k - l_k c_{k-1}$, $k = 2, \ldots, n$

{FROM l_2 WE CAN FIND v_2}