

$$\begin{array}{ccc}
 V^* & \xlongequal{\quad} & V^* \\
 \ell_\varepsilon \uparrow & & \uparrow \ell'_\varepsilon \\
 K^{n+1} & \xrightarrow{a \mapsto Ta} & K^{n+1}
 \end{array}$$

$$\begin{array}{ccc}
 x_j & \xlongequal{\quad} & \sum_{i=0}^n t_{ij} y_i \\
 \uparrow & & \uparrow \\
 \mathbf{e}_j & \mapsto & \sum_{i=0}^n t_{ij} \mathbf{e}_i
 \end{array}$$