

$$\mathbb{G}^{[k]}_{\mathbb{A}} = \left( \begin{array}{c|cccc|cccc} & \overbrace{\hspace{1.5cm}}^{k+1} & & & & & & & \\ 1 & 0 & \cdots & 0 & 0 & \cdots & \cdots & 0 \\ \bullet & \ddots & \ddots & \vdots & \vdots & & & \vdots \\ \vdots & \ddots & \ddots & 0 & \vdots & & & \vdots \\ \bullet & \cdots & \bullet & 1 & 0 & \cdots & \cdots & 0 \\ \hline \bullet & \cdots & \cdots & \bullet & 1 & 0 & \cdots & 0 \\ \vdots & \ddots & \ddots & \vdots & \bullet & \ddots & \ddots & \vdots \\ \vdots & \ddots & \ddots & \vdots & \vdots & \ddots & \ddots & 0 \\ \bullet & \cdots & \cdots & \bullet & \bullet & \cdots & \bullet & 1 \end{array} \right) \left( \begin{array}{c|ccc} & \overbrace{\hspace{1.5cm}}^{k+1} & & \\ & & & \\ \Delta_{k+1} & & \bullet & \cdots & \bullet \\ \vdots & & \vdots & & \vdots \\ \bullet & \cdots & \bullet & \cdots & \bullet \\ \hline \bullet & \cdots & \bullet & \cdots & \bullet \\ \vdots & & \vdots & & \vdots \\ \bullet & \cdots & \bullet & \cdots & \bullet \end{array} \right)$$