

$$\begin{aligned} A = \begin{pmatrix} 0 & 2 & 7 \\ 1 & -2 & 2 \\ 1 & 0 & 9 \end{pmatrix} &\implies \begin{pmatrix} 1 & -2 & 2 \\ 0 & 2 & 7 \\ 1 & 0 & 9 \end{pmatrix} \implies \begin{pmatrix} 1 & -2 & 2 \\ 0 & 2 & 7 \\ 0 & 2 & 7 \end{pmatrix} \implies \begin{pmatrix} 1 & 0 & 0 \\ 0 & 2 & 7 \\ 0 & 2 & 7 \end{pmatrix} \\ &\implies \begin{pmatrix} 1 & 0 & 0 \\ 0 & 2 & 7 \\ 0 & 0 & 0 \end{pmatrix} \implies \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 3.5 \\ 0 & 0 & 0 \end{pmatrix} \implies \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 0 \end{pmatrix} = \tilde{A}. \end{aligned}$$