



(a)

$$\mathbf{w}_{k=1} = \begin{bmatrix} w_{111} & w_{121} & w_{131} & w_{141} \\ w_{211} & w_{221} & w_{231} & w_{241} \\ w_{311} & w_{321} & w_{331} & w_{341} \\ 0 & 0 & 0 & 0 \end{bmatrix}$$

$$\mathbf{w}_{k=2} = \begin{bmatrix} w_{112} & w_{122} & 0 & 0 \\ w_{212} & w_{222} & 0 & 0 \\ w_{312} & w_{322} & 0 & 0 \\ w_{412} & w_{422} & 0 & 0 \end{bmatrix}$$

(b)