$$\mathbf{A}_{(1)} = \begin{bmatrix} a_{111} & a_{121} & a_{131} & a_{141} \\ a_{211} & a_{221} & a_{231} & a_{241} \\ a_{311} & a_{321} & a_{331} & a_{341} \end{bmatrix} \begin{bmatrix} a_{112} & a_{122} & a_{132} & a_{142} \\ a_{212} & a_{222} & a_{232} & a_{242} \\ a_{312} & a_{322} & a_{332} & a_{342} \end{bmatrix}$$

$$\mathbf{A}_{(2)} = \begin{bmatrix} a_{111} & a_{211} & a_{311} \\ a_{121} & a_{221} & a_{321} \\ a_{131} & a_{231} & a_{331} \\ a_{141} & a_{241} & a_{341} \end{bmatrix} \begin{bmatrix} a_{112} & a_{212} & a_{312} \\ a_{122} & a_{222} & a_{322} \\ a_{132} & a_{232} & a_{332} \\ a_{142} & a_{242} & a_{342} \end{bmatrix}$$

$$\mathbf{A}_{(3)} = \begin{bmatrix} a_{111} & a_{211} & a_{311} \\ a_{112} & a_{212} & a_{312} \end{bmatrix} \begin{bmatrix} a_{121} & a_{221} & a_{321} \\ a_{122} & a_{222} & a_{322} \end{bmatrix} \begin{bmatrix} a_{131} & a_{231} & a_{331} \\ a_{132} & a_{232} & a_{332} \end{bmatrix} \begin{bmatrix} a_{141} & a_{241} & a_{341} \\ a_{142} & a_{242} & a_{342} \end{bmatrix}$$