

$$\begin{aligned}
&a_{11}^2+a_{21}a_{22}+a_{31}a_{33}=0, \; a_{11}a_{12}+a_{22}a_{32}+a_{33}a_{33}=0, \; a_{11}a_{13}+a_{22}a_{23}+a_{33}^2=0, \; a_{21}a_{22}a_{11}^2+a_{31}a_{33}a_{11}^2-a_{11}a_{31}a_{21}a_{21}a_{22}a_{31}a_{11} \\
&\qquad \qquad \qquad \text{a}_{32}a_{33}a_{32}a_{33}=0, \; a_{22}^2a_{33}-a_{22}^{23}a_{32}a_{32}+a_{11}a_{32}a_{32}a_{33}-a_{12}a_{32}a_{22}a_{33}a_{22}a_{32}a_{32}+a_3a_{21}a_{22}a_{33}a_{12}+a_{11}a_{32}a_{33}- \\
&a_{13}a_{22}a_{22}a_{33}-a_{13}a_{33}a_{33}a_{32}=0, \\
&\qquad \qquad \qquad \text{a}_{23}a_{33}+a_{13}a_{23}
\end{aligned}$$