

$$a_{11}^2+a_{21}a_{22}=0, \textcolor{blue}{a_{11}}a_{12}+a_{22}^2=0, \textcolor{blue}{a_{12}a_{22}}(a_{11}a_{22}-a_{12}a_{21})=0, \textcolor{blue}{a_{11}a_{21}}(a_{11}a_{22}-\textcolor{blue}{a_{12}a_{22}})=0, (\textcolor{blue}{a_{11}a_{22}-a_{12}a_{21}})(a_{11}a_{22}+a_{12}a_{22})=0,$$