8.05

torsdag 29 februari 2024 20:48

$$A = \begin{bmatrix} a_{11} & a_{12} & \cdots & a_{1n} \\ 0 & a_{22} & \cdots & \vdots \\ \vdots & \vdots & \ddots & \vdots \\ 0 & 0 & \cdots & a_{nn} \end{bmatrix}$$

$$\det(\lambda I - A) = \begin{vmatrix} \lambda_1 - a_{11} & -a_{12} & \cdots & -a_{1n} \\ 0 & \lambda_2 - a_{22} & \cdots & -a_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ 0 & 0 & \cdots & \lambda_n - a_{nn} \end{vmatrix} =$$

$$= (\lambda_1 - a_{11}) \cdot (\lambda_2 - a_{22}) \cdot \ldots \cdot (\lambda_n - a_{nn}) = 0$$

dvs $\rightarrow$ $\lambda_1 = a_{11}$, $\lambda_2 = a_{22}, \ldots, \lambda_n = a_{nn}$

V S V