

QUESTION

Evaluate the determinant of the matrix $\begin{pmatrix} 1 & 1 & 0 \\ 2 & -1 & 3 \\ -1 & 0 & 1 \end{pmatrix}$.

ANSWER

$$\det \begin{pmatrix} 1 & 1 & 0 \\ 2 & -1 & 3 \\ -1 & 0 & 1 \end{pmatrix} = 1(-1 - 0) + 1(-3 - 2) + 0 = -1 - 5 = -6$$