

QUESTION

Calculate the determinant of the matrix $\mathbf{A} = \begin{pmatrix} 3 & -1 & 0 \\ 1 & 2 & 1 \\ 2 & -2 & 1 \end{pmatrix}$.

ANSWER

$$\det \mathbf{A} = \begin{vmatrix} 3 & -1 & 0 \\ 1 & 2 & 1 \\ 2 & -2 & 1 \end{vmatrix} = 3(2 - (-2)) - 1(2 - 1) + 0 = 3(4) - 1 + 0 = 11$$