Quiz 4 Lyell Read 933 609 535 4/23/2019

Find $\det \begin{pmatrix} -2 & 5 & 4 \\ 5 & 3 & 1 \\ 1 & 4 & 5 \end{pmatrix}$ ①+2③ $\longrightarrow \begin{pmatrix} 0 & 13 & 14 \\ 5 & 3 & 1 \\ 1 & 4 & 5 \end{pmatrix}$

$\begin{pmatrix} -2_{11} & 5_{12} & 4_{13} \\ 5 & 3 & 1 \\ 1 & 4 & 5 \end{pmatrix}$

chk sign

$-2 \cdot \det \begin{pmatrix} 3 & 1 \\ 4 & 5 \end{pmatrix}$ $15-4$ $-5 \cdot \det \begin{pmatrix} 5 & 1 \\ 1 & 5 \end{pmatrix}$ $25-1$

$+ 4 \cdot \det \begin{pmatrix} 5 & 3 \\ 1 & 4 \end{pmatrix}$ $20-3$

ad-bc

$\begin{vmatrix} (1+i) \\ -1 \end{vmatrix} = \text{sign}$

$-2(15-4) - 5(25-1) + 4(20-3)$

$-2(11) - 5(24) + 4(17)$

$-22 - 120 + 68$

$-120 + 46$

$= -74$

$24 \times 5 = 120$ $17 \times 4 = 68$

$68 - 22 = 46$

$120 - 146 = -74$