CHEN.3170 Applied Engineering Problem Solving

A Short Quiz on Linear Algebra Notation and Calculations

Given the following matrices: $\underline{\underline{A}} = \begin{bmatrix} 1 & -1 & 2 \\ 0 & 2 & 3 \\ -4 & 2 & -1 \end{bmatrix}$ and $\underline{\underline{b}} = \begin{bmatrix} 1 \\ 0 \\ -1 \end{bmatrix}$

Compute $\underline{\mathbf{x}}$ via the expression $\underline{\mathbf{x}} = \underline{\underline{\mathbf{A}}}^{-1}\underline{\mathbf{b}} = \frac{\underline{\underline{\mathbf{C}}}^{\mathrm{T}}}{\det \underline{\underline{\mathbf{A}}}}\underline{\mathbf{b}}$ (show your work...).