

MEEG 4703 [Quiz m1.183](#)

1. (20 pts) Describe the following: (a) a determinant, (b) a matrix, (c) the minor determinant M_{ij} for element a_{ij} of a determinant of order n , (d) formulas for the cofactor C_{ij} for element a_{ij} of a determinant of order n , (e) the expansion of $\det \mathbf{A}$ by cofactors along its j -th column, where $1 \leq j \leq n$.
2. (20 pts) Evaluate the determinant $\det \mathbf{A}$ of the matrix

$$\mathbf{A} = \begin{bmatrix} 5 & 1 & 2 & 4 \\ -1 & 0 & 2 & 3 \\ 1 & 1 & 6 & 1 \\ 1 & 0 & 0 & -4 \end{bmatrix}$$

2. $\det \mathbf{A} = 34$