

Problem 1

Compute the determinant of the following matrices:

$$A = \begin{pmatrix} 1 & 2 \\ 4 & -1 \end{pmatrix} \quad B = \begin{pmatrix} 1 & 0 & -1 \\ 4 & -1 & 2 \\ 1 & 3 & -4 \end{pmatrix}.$$

Problem 2

Compute the determinant of the following matrix

$$A = \begin{pmatrix} 5 & 0 & 4 & 0 \\ 1 & 0 & 1 & 0 \\ 8 & -1 & 7 & 2 \\ 1 & 1 & 1 & 0 \end{pmatrix}.$$

Problem 3

Compute the determinant of the following matrix

$$A = \begin{pmatrix} 2 & 1 & 0 & 2 \\ 1 & 2 & 1 & 2 \\ -1 & 1 & -3 & 2 \\ 1 & -1 & 1 & 0 \end{pmatrix}.$$

Hint: Use row operations!