Problem 1

Compute the sign of the permutation $\sigma = (3214)$ by first computing the length. Compute its inverse.

Solution

Problem 2

Compute the determinant of the following matrix

$$A = \begin{bmatrix} 1 & 0 & 2 \\ 0 & 2 & 1 \\ 2 & 1 & 0 \end{bmatrix}$$

Solution

Problem 3

Compute the determinant of the following matrix

$$B = \begin{bmatrix} 1-\lambda & 0 & 2 \\ 0 & 2-\lambda & 1 \\ 2 & 1 & -\lambda \end{bmatrix}$$

Solution