KUTAISI INTERNATIONAL UNIVERSITY

Quiz (G-9)

Linear Algebra for Informatics
Fall semester 2024
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Definition

Consider two $n \times n$ matrices A and B. We say that A is similar to B if there exists an invertible matrix S such that:

$$AS = SB, \quad \text{or} \quad B = S^{-1}AS$$

Problem

is matrix $A = \begin{pmatrix} 1 & 2 \\ 4 & 3 \end{pmatrix}$ similar to $B = \begin{pmatrix} 5 & 0 \\ 0 & -1 \end{pmatrix}$?

Problem

Compute $(2 - 5i)\left(\frac{i}{2} - 2\right) - i + 4$

Compute $\frac{-2 + 2i}{-1 - 2i}$ and then try to plot it