

THEORY OF MATRIX

Homework

5, 6, x

Problems

1. Problem 5

设 $A = \begin{bmatrix} 2 & 1 & 0 \\ 0 & 0 & 1 \\ 0 & 1 & 0 \end{bmatrix}$ 求 $e^A, e^{tA} (t \in R), \sin A$

Answer

2. Problem 6

若 $f(z) = \ln z$, 求 $f(A)$, 这里 A 为

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

Answer

3. Problem x

设矩阵 $A = \begin{bmatrix} 4 & 6 & 0 \\ -3 & -5 & 0 \\ -3 & -6 & 1 \end{bmatrix}$ 求 e^A .