

Quiz 16

Determine whether the following operators and matrices are diagonalizable. If so, find a diagonalizing basis of eigenvectors.

(1) $A = \begin{pmatrix} 0 & -2 \\ 1 & 3 \end{pmatrix}$ in $M_2(\mathbb{R})$.

(2) $T \in \mathcal{L}(\mathbb{P}_2)$ given by $T(f) = f(0) + f(1)(x + x^2)$.