Handwritten HW 36

Page 424

26. Mark the statement true or false (T/F). Justify your answer.

There are symmetric matrices that are not orthogonally diagonalizable.

Solution:

27. Mark the statement true or false (T/F). Justify your answer.

An orthogonal matrix is orthogonally diagonalizable.

Solution:

28. Mark the statement true or false (T/F). Justify your answer.

If $B = PDP^T$, where $P^T = P^{-1}$ and D is a diagonal matrix, then B is a symmetric matrix.

Solution:

32. Mark the statement true or false (T/F). Justify your answer.

The dimension of an eigenspace of a symmetric matrix is sometimes less than the multiplicity of the corresponding eigenvalue.

Solution: