

Handwritten HW 23

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20. Use a property of determinants to show that A and A^T have the same characteristic polynomial.

Solution:

21. A and B are $n \times n$ matrices. Mark the statement true or false (T/F).
Justify your answer.
If 0 is an eigenvalue of A , then A is invertible.

Solution:

23. A and B are $n \times n$ matrices. Mark the statement true or false (T/F).
Justify your answer.
The matrix A and its transpose, A^T , have different sets of eigenvalues.

Solution:

28. A and B are $n \times n$ matrices. Mark the statement true or false (T/F).
Justify your answer.
The multiplicity of a root r of the characteristic equation of A is called the algebraic multiplicity of r as an eigenvalue of A .

Solution:

30. A and B are $n \times n$ matrices. Mark the statement true or false (T/F).
Justify your answer.
The matrix A can have more than n eigenvalues.

Solution: