

Proof E and D-2

Accepted

Not Accepted

I affirm this work abides by the university's Academic Honesty Policy.

Print Name, then Sign

- First due date **Thursday, November 20**.
- Turn in your work on a separate sheet of paper with this page stapled in front.
- Do not include scratch work in your submission.
- There is to be **no collaboration** on any aspect of developing and presenting your proof. Your only resources are: you, the course textbook, me, and pertinent discussions that occur **during class**.
- Follow the Writing Guidelines of the Grading Rubric.
(http://math.ups.edu/~bryans/Current/Fall.2008/290inf_Fall2008.html#tth_sEc5.1)
- Retry: Only use material from the relevant section or earlier.
- Retry: Start over using a new sheet of paper.
- Retry: Restaple with new attempts first and this page on top.

"A life spent making mistakes is not only more honorable, but more useful than a life spent doing nothing."
– George Bernard Shaw

E and D-2 (You may use material up through Section EE)

Suppose that A is a matrix that is equal to its inverse, $A = A^{-1}$.

1. Prove that the only possible eigenvalues of A are $\lambda = 1$ and $\lambda = -1$.
 2. Give an example of matrix that is equal to its inverse and actually has both of these possible values as eigenvalues.
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