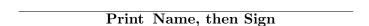
Proof V-2

Accepted Not Accepted

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



- First due date Thursday, February 25.
- 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 in the course information sheet.
- Retry: Only use material from the relevant section of the text or earlier.
- Retry: Start over using a new sheet of paper.
- Retry: Restaple with new attempts first and this page on top.

"'Know thyself?' If I knew myself, I'd run away." - Johann von Goethe

V-2 (Section O) Prove both parts of the following.

Theorem 1 1. Suppose $S = \{\vec{v}_1, \vec{v}_2, \dots, \vec{v}_{n-1}, \vec{v}_n\}$ is a linearly independent set of vectors and that $n \geq 2$. Then $T = \{\vec{v}_1, \vec{v}_2, \dots, \vec{v}_{n-1}\}$ is also linearly independent.

2. Suppose $S = \{\vec{v}_1, \vec{v}_2, \dots, \vec{v}_{n-1}, \vec{v}_n\}$ is a linearly independent set of vectors and that $\vec{z} \notin \langle S \rangle$. Then $W = \{\vec{v}_1, \vec{v}_2, \dots, \vec{v}_{n-1}, \vec{v}_n, \vec{z}\}$ is also linearly independent.