University of Toronto Scarborough Campus
Department of Computer and Mathematical Sciences

Assignment Guidelines

This assignment was released on Monday March 28th at 13:00 and is due on Thursday April 7th at 13:00 .

We encourage you to talk to your TAs during tutorial, attend office hours, and ask professors for help with this assignment. You may use the textbook without citing it as a reference, however all other books and internet sources must be cited. Please submit your original work via Crowdmark.

The version of this assignment on Crowdmark is the only official version of the assignment. This PDF is provided for your reference. Please check the version on Crowdmark before uploading your solutions.

Problems

Q1. Let U and V be vector spaces. Let S and T be linear maps from U to V. Prove that

$$\text{null}(S) \cap \text{null}(T) = \text{null}(S+T) \cap \text{null}(S-T)$$