

Writing Assignment 6

Due Friday, October 2, 11:59 PM

This assignment is very similar to last week's. It is meant, again, to help you study for the upcoming exam.

Below are two prompts. **Choose one** and respond to it.

Prompt One. Identify a concept/idea from this course (or any other math course) that you feel you have not understood as well as you would like.

Write what that idea is, and what you know about it, or what about it confuses you. Take at least 15 minutes on this, and really focus on identify *what* about this idea is confusing—is it just a definition thing? Or is it that you don't understand the words in the definition? How deep do you need to dig? *You must write something about identifying what about this idea is confusing.* Simply writing "I am confused" is not sufficient. This is meant to have you develop the skill of identifying where you are stuck, and having you overcome it.

Now spend 30 to 45 minutes reading class notes, or looking over videos, to better understand this topic. (You might try to look things up online, but in most cases in the past, most students don't come away with a better understanding afterward. So be careful! Your improvement will really come from you sitting down and trying to trace the roots of your confusions.) *Make sure you are trying to address the aspect(s) of this idea that were causing you confusion.*

Finally, spend at least 30 minutes writing about what you have now gained—what have you understood more of? Does it feel comfortable now? Why or why not?

Prompt Two. Let A be a subset of a topological space X . Could there be *two* different topologies on A that satisfy the universal property of subspaces? Explore.

(This does *not* require you to write down the definition of the subspace topology; only the universal property of it.)