

*Transition to Advanced Mathematics: assignments 5-6*

Fix a universe  $U$  and suppose that  $A, B,$  and  $C$  are sets within  $U$ . Consider the statement:

$$[A \subseteq C \wedge B \subseteq C] \Rightarrow [A \cap B \subseteq C]$$

- 1) Write up a proof of the statement. Do not put your name on it, but rather choose a random number that is unlikely that somebody else would choose.
- 2) Turn in your proof on February 13<sup>th</sup>. They will be shuffled and given out at random (such that nobody receives his or her own).
- 3) On a separate sheet of paper grade the proof you receive using the proof grading rubric. Explain why you choose the 6 marks that you choose. (Please do not make any marks on the original proof)
- 4) Turn in both pages on February 18<sup>th</sup>. On your grade sheet write your name as well as the number chosen in (1).

Assignment #5 is the proof itself.

Assignment #6 is grading the proof. An accurate grade is worth full credit.