

MA 515 Homework #1
Due Friday, September 8

1. In your own words, write out a proof of Theorem 3.15 (updated numbering as it appears currently online).
2. Prove Theorem 3.18. Suggestion: create the “ A ” matrix for the points under consideration.
3. Prove Theorem 3.19. Suggestion: Prove this by induction on the number m of sets. Find an appropriate point for every collection of $m - 1$ sets. Now try to use Theorem 3.18.
4. Write up solutions to the problems (or parts of problems) that you presented on the board and email them to me for insertion into the course notes. If you are having trouble with LaTeX, then you can write them by hand.