Math 145A
Spring 2017

UPDATED GENERAL INFORMATION — MARCH 6, 2017

Hints for the Quiz 3 *study problems*

In the interests of not giving everything away, these are deliberately a little sketchy.

(1) Take a set X which has two topologies, one of which contains the other; explicit examples are needed.

(2) What happens if A is a one point subset of the line or plane?

(4) What do we know about the complements of finite subsets in a Hausdorff space?

(5) Recall that the closure of a set is a closed subset.

(6) What must be added to form the closure of this set, and what must be subtracted to form the latter's interior?

(7) Look for examples where A and B are disjoint.

(8) Write $L_i = U_i \cap E_i$ where U_i is open and E_i is closed.

(9) What do we know about the product of two closed subsets? If $F \times \{y\}$ is a closed subset of $X \times Y$, why is F closed in X?

(10) Why is there an open subset in $\mathcal{N}_p$ which is not in $\mathcal{N}_q$?