Math 145A
Winter 2020

UPDATED GENERAL INFORMATION – MARCH 2, 2020

***Supplementary readings for Chapters* 10 – 12**

Here are some documents and descriptions of their contents.

http://math.ucr.edu/~res/math145A-2017/corestrictions.pdf

If f is a function from A to B such that the image of f is contained in a subset C, then the graph of f can also be viewed as the graph of a function g from A to C whose values at elements of A are identical to those of f. Furthermore, if f is a continuous mapping of topological spaces and C has the subspace topology, then a result from Chapter **10** of the notes shows that g is also a continuous mapping. This file summarizes a few formal properties of this construction (which is generally not formulated explicitly in mathematical writings).

http://math.ucr.edu/~res/math145A-2017/nicecurves.pdf

http://math.ucr.edu/~res/math145A-2017/nicecurves2.pdf

If U is an open set in coordinate n – space, the main curves of interest in differential geometry are continuous curves which have a continuously varying nonzero tangent vector at each point. The purpose of these documents is to prove that if U is connected then every pair of distinct points can be joined by a curve with these properties. A proof is described in the first of these, and the second contains drawings which illustrate some of the main ideas.