

Math 40760, Fall 2009 Homework

Weeks 13, 14

Reread §§4-3, 4-5 and 4-4 in that order or the handout on this material (or both for two ways of doing it).

Assignment 12, revised, due Friday, December 4

§4-2 #9,10,11,12,16

§4-3 #3,7,9

§4-5 #1,2,3,4 if we get far enough by Wednesday, December 2

For §4-5 #2,3 you will find it useful to remember that $K = \det dN$ and use the change of variables formula for double integrals, which says that if S, S' are surfaces and $\phi : S \rightarrow S' = \phi(S)$ is a diffeomorphism then

$$\iint_{S'} f(u) d\sigma' = \iint_S f(\phi(x))(\det d\phi)(x) d\sigma.$$