

**MATH 206, SPRING 2007, HOMEWORK 6**

A. Read the short Stereographic Projection handout on the class web site. Prove the claim that the transition map  $(u, v) = \vec{x}^{-1}(y(s, t))$  is orientation-preserving by showing that the determinant of the Jacobian is positive.

B. Section 2.4 Problem 8

C. Section 2.4 Problem 10

D. Section 2.4 Problem 16

E. Section 2.4 Problem 28

F. Section 2.5 Problem 1

G. Section 2.5 Problem 10

H. Section 2.5 Problem 12