

PROBLEM SET 2

TOPICS IN MANIFOLDS, SPRING 2016

Problem 1. Show that any two points of a complete Euclidean surface may be connected by a line segment (see Exercise 2.8.3 from Stillwell).

Problem 2. Give an appropriate definition of a covering of one euclidean surface by another, and hence show that a cylinder covers the twisted cylinder, and a torus covers the Klein bottle (See Exercise 2.8.4 from Stillwell).