

Math 131  
Warm-up 6

Name:

Let  $(E, d)$  be a metric space. We have seen that if  $S \subset E$ , then  $(S, d)$  is a metric space which has the same metric as  $(E, d)$ . Prove that if  $A$  is an open set in  $(E, d)$ , then  $A \cap S$  is an open set in  $(S, d)$ . Is the converse true? Give a proof or a counterexample.