

Math 131  
Warm-up 33

Name:

Let  $f : E \rightarrow E'$ . We say  $f$  is *Lipschitz continuous* if there exists an  $M > 0$  such that for all  $x, y \in E$ ,  $d'(f(x), f(y)) \leq Md(x, y)$ . Prove that if  $f$  is Lipschitz continuous then  $f$  is uniformly continuous but not the converse.