

Date: _____

Day: _____

in Y is open set in X

then for every

$x_0 \in X$ and

ϵ -neighborhood N_ϵ of Mx_0

The inverse image

N_0 of N is open

Since

N is open and

N_0 contains x_0

hence

N_0 also contains a δ -

neighborhood of x_0

which is mapped into N

because

N_0 mapped into N

consequently by def

M is continuous at x_0

$x_0 \in X$ was arbitrary

M is continuous

