<u>Homework #20</u>- Hand in no later than 2:41 p.m., Wednesday, July 26.

Give an example of the type described or prove there is no such example:

1. A one-to-one linear function $f : X \rightarrow f(X) = Y$ from one linear space onto another such that the inverse function $f^{-1} : Y \rightarrow X$ is not linear.

2. A one-to-one continuous linear function $f : X \rightarrow f(X) = Y$ from one pseudonormed linear space onto another pseudonormed linear space such that the inverse function $f^{-1} : Y \rightarrow X$ is not continuous.