Homework Assignment #1

By: The Easter Bunny

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Hi everyone. This is the Easter Bunny bringing you Easter cheer in the form of a homework assignment! It will be due ??????????????????????????. Rock on!

1. Let $X$ and $Y$ be topological spaces, and suppose $f : X \to Y$ is a function. Prove that $f$ is continuous if and only if for all closed sets $F \subseteq Y$ we have $f^{-1}(F)$ is also closed.

2.