Homework #11- Hand in no later than 2:41 p.m., Monday, June 19

Prove or give a counterexample:

1. Suppose $f : X \to Y$ is a continuous function from one topological space into another and suppose (x_n) is a sequence in X that clusters at p. Then the sequence $(f(x_n))$ clusters at $f(p)$.

2. If p is a limit of the sequence (x_n), then the set $S = \{x_n : n \quad Z_+\} \quad \{p\}$ is compact.