

Name:

Problem 1: Let X be a topological space, A be a subspace of X , and $x_n \in A$ for $n = 1, 2, \dots$. Suppose that the sequence $\{x_n\}$ converges to $x \in X$. Show that $x \in \overline{A}$.

For partial credit, please give the definition of “ $\{x_n\}$ converges to x ” for topological spaces.