1. Prove that if every point of a topological space X has a neighborhood which is a Baire space, then X is a Baire space.

2. Prove that if $X = \bigcup_{n\in\mathbb{N}} X_n$ is a nonempty Baire space, then $\overline{X_n}$ has a nonempty interior for at least one $n \in \mathbb{N}$.