

Math 131
Warm-up 12

Name:

Let $\{x_n\}$ be a sequence in a metric space (E, d) . Let $a \in E$, and suppose that $\{x_n\}$ has a subsequence which converges to a . Prove that for every $\varepsilon > 0$ and for every $N \in \mathbb{N}$, there is an $n > N$ such that $d(x_n, a) < \varepsilon$.