

Exercises

E9.4 [ON3] If $(x_n)_n \subset X$ is a sequence and $x \in X$, show that $\lim_{n \rightarrow \infty} x_n = x$ if and only if, for each sub-sequence n_k there exists a sub-sub-sequence n_{k_h} such that $\lim_{h \rightarrow \infty} x_{n_{k_h}} = x$.

Solution 1. [ON4]