

Definition 8.65. [OK4] Let (Y, σ) be a Hausdorff topological space. Let (J, \leq) be a set with filtering order (defined in [06M]). Let $\varphi : J \rightarrow Y$ be a net (already met in Sec. [29X]).

We define that $\lim_{j \in J} \varphi(j) = \ell \in Y$ if and only if, for every neighborhood V of ℓ in Y you have that $\varphi(j) \in V$ eventually for $j \in J$.