

$$\lim_{x \rightarrow x_0} f(x) = 0 \Leftrightarrow \forall \varepsilon > 0 \exists \delta > 0 : |f(x)| < \varepsilon \quad \forall x \in (\exists x_0 - \delta, x_0 + \delta[\setminus \{x_0\}) \cap A$$

$$\lim_{x \rightarrow x_0} |f(x)| = 0 \Leftrightarrow \forall \varepsilon > 0 \exists \delta > 0 : ||f(x)|| < \varepsilon \quad \forall x \in (\exists x_0 - \delta, x_0 + \delta[\setminus \{x_0\}) \cap A$$

$$|f(x)| = \underbrace{||f(x)||}_{\geq 0} ? \quad (51)$$