Definition 17.e.2. [1F6]*Let now $A \subseteq \mathbb{R}^n$ an open non-empty set, let $f, \varphi : A \to \mathbb{R}$ be real functions of class C^1 on A. Having fixed $a \in \mathbb{R}$ we then define the level set*

$$E_a = \{x \in A : \varphi(x) = a\}$$

*we assume that E_a is non-empty, and that $\nabla\varphi(x) \neq 0$ for each $x \in E_a$. We call **local minimum point of f bound to** E_a a point of E_a that is a local minimum for $f|_{E_a}$; and similarly for maxima.*