

# Exercises

E15.46 [18Z] Note: another vice versa of [183].

Given  $I \subseteq \mathbb{R}$  interval and  $f : I \rightarrow \mathbb{R} \cup \{\infty\}$  convex and lower semicontinuous, there exist sequences  $a_n, b_n \in \mathbb{R}$  such that  $f(x) = \sup_n (a_n + b_n x)$ .

**Solution 1.** [190]