

# Exercises

4.48 [19c] Let  $C \subset \mathbb{R}^n$  be a convex,  $f : C \rightarrow \mathbb{R}$  a convex function, and  $r \in \mathbb{R}$ : then  $\{x \in C, f(x) < r\}$  and  $\{x \in C, f(x) \leq r\}$  are convex (possibly empty) sets.