

## Exercises

3.147 [095] Show that there is a function  $f : \mathbb{R} \rightarrow \mathbb{R}$  such that  $f(f(x)) = -x$ . Is there a continuous function for which  $f(f(x)) = -x$ ? (Hint: show that for every such  $f$  you have  $f^{-1}(\{0\}) = \{0\}$ ).

**Solution 1.** [096]