

Exercises

E13.2 [14Y] Let x_n, y_n be strictly positive real sequences with limit zero; there is a continuous and monotonic function $f : [0, \infty) \rightarrow [0, \infty)$ such that $f(0) = 0$ and $\forall x > 0, f(x) > 0$, and such that $\forall n, f(x_n) < y_n$ (hence $\lim_{x \rightarrow 0^+} f(x) = 0$).

Solution 1. [14Z]