

## Exercises

E9.71 [OS2] Let us fix  $\alpha \in \mathbb{R}$ , consider the set  $A$  of numbers of the form  $\alpha n + m$  with  $n, m$  integers. Show that  $A$  is dense in  $\mathbb{R}$  if and only if  $\alpha$  is irrational.

**Solution 1.** [OS3]