

## Exercises

E6.60 [OC9] Given  $p(x) = a_0 + a_1x + \cdots + a_nx^n$ ,  $p \in \mathbb{Q}[z]$  such that  $p(\alpha) = 0$ , build a polynomial  $q \in \mathbb{Z}[z]$  such that  $q(\alpha) = 0$ .

So the definition of *algebraic* can be given equivalently with polynomials with integer coefficients.