

Exercises

E6.60 [OCB] Given $\alpha \neq 0$ and $p(x) = a_0 + a_1x + \cdots + a_nx^n$, $p \in \mathbb{Q}[z]$ such that $p(\alpha) = 0$, build a polynomial $q \in \mathbb{Q}[z]$ such that $q(1/\alpha) = 0$.

So if $\alpha \neq 0$ is algebraic then $1/\alpha$ is algebraic.

Solution 1. [OBR]