

Exercises

E6.52 [OC3] Fixed $k > 0$, $\varepsilon > 0$ and a rational number x , prove that there exist only finitely many rationals α that can be represented as $\alpha = m/n$ in order to satisfy the relation

$$\left| x - \frac{m}{n} \right| \leq \frac{k}{n^{1+\varepsilon}} \quad .$$

Solution 1. [OC4]