



PROBLEM # 661

Posted on: 16 Oct

Due on: 23 Oct

Find all angles α such that $\cos(\alpha)$ is a rational number, but $\cos(2023\alpha)$ is an irrational number.

If such an α exists, give an explicit example.

If no such α exists, give a proof of nonexistence.

The problem of the week can also be found online here:

