Difficulty: 3/4 Interest: 2/4

For each $2n$-gon there exists some number ℓ_n such that there is a equilateral convex polygon with integer coordinates such that all sides have length ℓ_n.

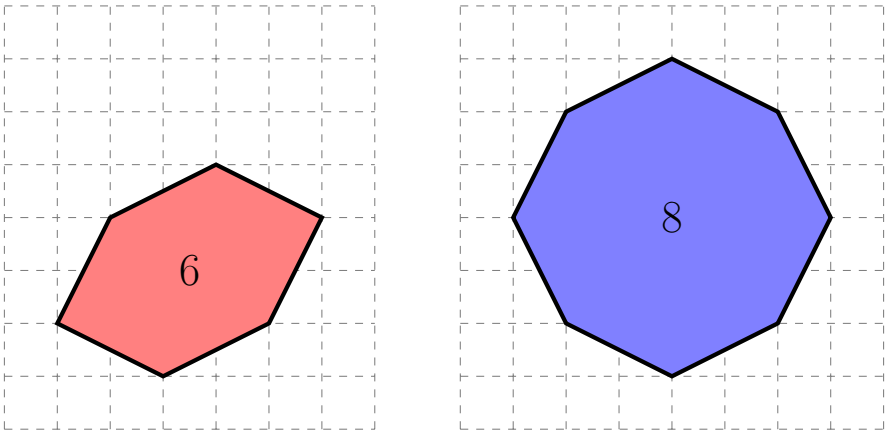

Figure 1: Example demonstrating that $\ell_6 = \ell_8 = \sqrt{5}$.

Question. For what values of m do there exist equilateral $(2m-1)$-gons with integer coordinates?

Related.

1. For m such that there are no equilateral $(2m-1)$-gons, what is do the best Diophantine approximations look like (in the sense of Problem 62)?
2. Does this generalize to polyhedra?

References.

`https://oeis.org/A071383`

Problem 62