6.5310: Geometric Folding Algorithms, Spring 2025

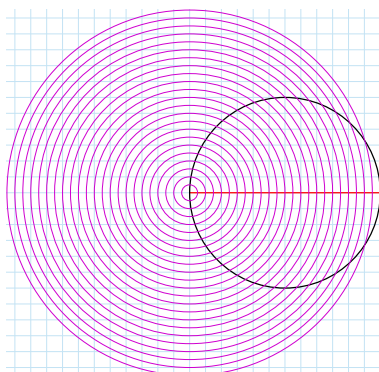Prof. Erik Demaine, Josh Brunner, Jenny Diomidova
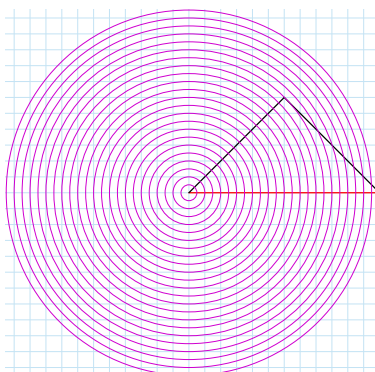
Problem Set 9 Solutions

Due: Tuesday, April 15, 2025 at 10am

Problem 9.1 [Slenderness]. For each of the following linkage adornments (where the red segment is the **base**, i.e., underlying bar of the linkage), is it slender?
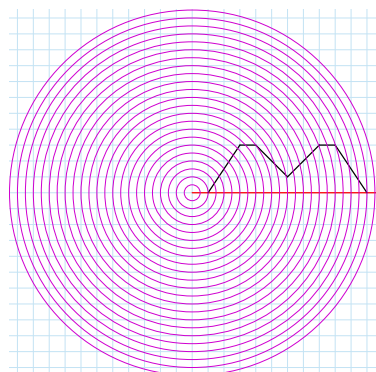
We draw concentric circles centered at one base endpoint and check whether they ever intersect the adornment is more than one place. Because these adornments are symmetric, it suffices to check circles centered at just one base endpoint.
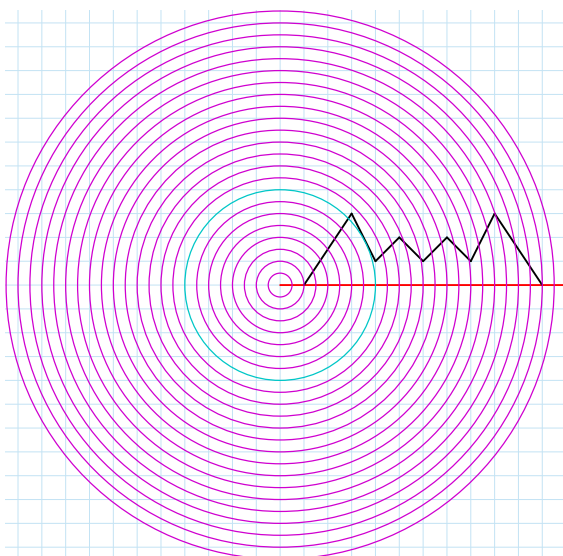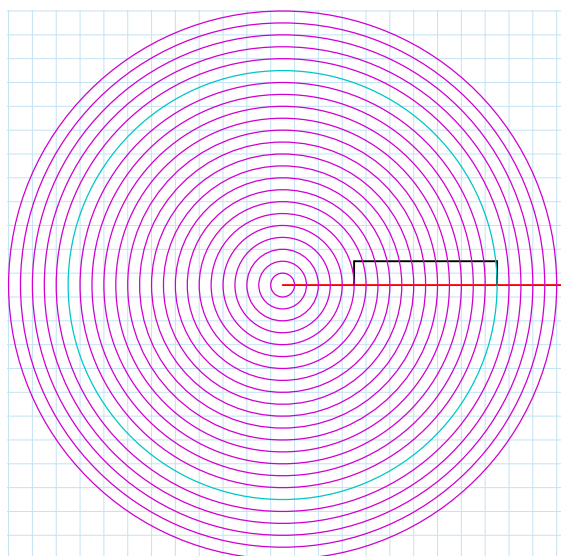

(a) Slender

(b) Slender

(c) Slender

(d) Not slender

(e) Not slender

Fun fact: in this sequence, each adornment contains the previous adornment.