

In-Class Exercise 1: Lines Intersecting Segment

What is the shape of the set of duals of all non-vertical lines that intersect a given line segment s ?

In-Class Exercise 2: Locally vs. Globally Convex

We are given a sequence of points p_0, p_1, \dots, p_{n-1} in the plane, such that for all $i \in \{0..n-1\}$, the sequence p_i, p_{i+1}, p_{i+2} are vertices of a triangle in counterclockwise order (indices are understood modulo n). Is this necessarily the sequence of vertices (in counterclockwise order) of a convex polygon?