Triangulations and Edge Flips, Part 2

Math 282 Computational Geometry

4. In your algorithm for #3, what is the largest number of edge flips that might be required? (Your answer should depend on n).

5. What is the largest number of edge flips that might be required to transform some triangulation of S into the triangulation produced by the incremental algorithm? What does this imply about the diameter of the flip graph of S? (The *diameter* of the flip graph is the length of the longest path between any two nodes in the graph.)

6. Let S be the 3×3 lattice, shown below. Find triangulations T_1 and T_2 of S such that the number of edge flips required to transform T_1 into T_2 is as large as possible. (This gives the diameter of the flip graph of S).