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Title: Asymptotic behavior of perimeters and areas of random polygons.

Abstract: Consider n random points uniformly distributed on the unit circumference. Recently Lao and Mayer considered all manner of random inscribed triangles having vertices in these points. They proved limit theorems (as n goes to infinity) for maximal perimeters and maximal areas of such triangles using the theory of U-max statistics. We generalize their results in three directions: a) convex m-polygons instead of triangles; b) almost arbitrary distribution of points instead of uniform one; c) ellipse instead of circumference in case of random areas.