1172-41-26 **Vladimir Andrievskii***, First ave, 6211, Kent, Ohio, 44240. *On geometry of complex polynomials.* Preliminary report.

We discuss the following three topics concerning algebraic polynomials.

First, let K be a compact set in the complex plane. We study the rate of approximation of K from the outside by lemniscates in terms of level lines of the Green function for the complement of K.

Second, the estimates of the uniform norm of the Chebyshev polynomials associated with K are considered. These estimates are exact (up to a constant factor) in the case where K consists of a finite number of quasiconformal curves or arcs. The case where K is a uniformly perfect subset of the real line is also discussed.

Third, we present the exact (up to the constants) double inequality for the Christoffel function for the generalized Jacobi measure supported on a Jordan domain bounded by a quasiconformal curve. Note that the quasiconformality of the boundary cannot be omitted. (Received August 06, 2021)