1020-51-41Mohammad Javaheri* (javaheri@uoregon.edu), 3119 Kinsrow Ave, #49, Eugne, OR 97401.Steiner Graphs in Hypberbolic Geometry. Preliminary report.

Given n distinct points on S^1 , we construct a graph with n leaves by using hyperbolic geometry of D^2 and show that if the extension of a hyperbolic isometry on D^2 to S^1 changes the n points, the corresponding graph does not change. Moreover the graph (that we call the Steiner graph of the configuration) has no vertex of degree 2 and can be realized as a geometric object inside D^2 . We present some open problems in the area as well. (Received August 03, 2006)