1146-52-431 **Ferenc Fodor*** (fodorf@math.u-szeged.hu), Department of Geometry, Bolyai Institute, University of Szeged, Aradi vértanúk tere 1, Szeged, 6720, Hungary. *Perimeter approximation of convex discs in the hyperbolic plane and on the sphere.*

The approximation theorems of Dowker play important roles in packing and covering problems. They state that the minimum area of convex n-gons containing a given convex disc K is a convex function of n, and the maximum area of convex n-gons contained in K is a concave function of n. Dowker's results were extended in various ways, for example, for perimeter in place of area, or to the sphere and hyperbolic plane.

The perimeter deviation of two convex discs is the difference of the perimeters of their union and intersection. Eggleston proved that in the Euclidean plane a convex n-gon that has minimum perimeter deviation from a given convex disc K is always inscribed in K. We study the relative positions of convex discs and their best approximating convex n-gons in the hyperbolic plane and on the sphere with respect to perimeter deviation. (Received January 28, 2019)