1096-05-1068 **Stephen J. Graves** and **Mark E. Watkins*** (`mewatkin@syr.edu`), Syracuse University, Mathematics Department, 215 Carnegie, Syracuse, NY 13244-1150. *Growth Rates of Face-Homogeneous Planar Tessellations.*

A tessellation of the Euclidean or hyperbolic plane is *face-homogeneous* if for some integer $k \geq 3$ there exists a cyclic sequence $\sigma = [p_0, p_1, \ldots, p_{k-1}]$ of integers ≥ 3 such that, for every face f of the tessellation, the valences of the vertices incident with f are given by the terms of σ in either clockwise or counter-clockwise order. When a given cyclic sequence σ is realizable in this way, it may determine a unique tessellation (up to isomorphism), in which case σ is called *unambiguous*, or it may be the valence sequence of two or more nonisomorphic tessellations (*ambiguous*). As tessellations of the hyperbolic plane are well-known to have exponential growth, we seek the face-homogeneous tessellation(s) of the hyperbolic plane of slowest growth and show that the least growth rate of unambiguous face-homogeneous tessellations is the "golden mean" $\gamma = (1 + \sqrt{5})/2$ attained by the sequences $[4, 6, 14]$ and $[3, 4, 7, 4]$. An ambiguous sequence may yield nonisomorphic tessellations with different growth rates. However, all such tessellations found thus far have growth rates greater than γ. (Received September 12, 2013)