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Landau's Theorem for Planar Harmonic Mappings

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Abstract. Landau gave a lower estimate for the radius of a schlicht disk centered at the origin and contained in the image of the unit disk under a bounded holomorphic function f normalized by $f(0) = f'(0) - 1 = 1$. Chen, Gauthier, and Hengartner established analogous versions for bounded harmonic functions. We improve upon their estimates.

Keywords. Landau Theorem, planar harmonic mappings.

2000 MSC. 30C99, 30C62.

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