

When the circular dilatation at a point equals one

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We discuss geometric and analytic conditions implying certain local behavior of quasiconformal mappings at a point in the plane where the circular dilatation equals one, e.g. conformality, $C^{1+\alpha}$ conformality, asymptotic homogeneity, weak conformality, or maximal stretch for the q.c. map at that point. Some results include extensions of the Teichmüller-Wittich-Belinskii theorem. Besides being of interest by themselves, they enjoy applications in Nevanlinna theory, modulus of continuity studies, complex dynamics, the theory of p -integrable Teichmüller spaces, some of which are highlighted.