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**Title:** Ahlfors's quasiconformal extension condition and  $\Phi$ -likeness

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The notion of  $\Phi$ -like functions is known to be a necessary and sufficient condition for univalence. By applying the idea, we derive several necessary conditions and sufficient conditions for that an analytic function defined on the unit disk is not only univalent but also has a quasiconformal extension to the Riemann sphere, as generalizations of well-known univalence and quasiconformal extension criteria, in particular, Ahlfors's quasiconformal extension condition.

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