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**Generalizations of the Liouville theorem.** (English) [Zbl 1144.53054](#)  
Differ. Geom. Appl. 26, No. 3, 339-345 (2008).

Summary: The purpose of this paper is to generalize the Liouville theorem for functions which are defined on complete Riemannian manifolds. Then, we apply it to isometric immersions between complete Riemannian manifolds in order to obtain an estimate for the size of the image of immersions in terms of the supremum of the length of their mean curvature vector in a quite general setting. The proofs are based on the Calabi's generalization of maximum principle for functions which are not necessarily differentiable.

**MSC:**

- 53C21 Methods of global Riemannian geometry, including PDE methods; curvature restrictions
- 53C40 Global submanifolds
- 53C20 Global Riemannian geometry, including pinching

**Keywords:**

generalized Liouville theorem; generalized maximum principle; Laplacian; mean curvature; isometric immersion

**Full Text:** [DOI](#)

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