UDC 515.125+517.550.2

MATEMATICHESKIE TRUDY
1998, V. 1, N 2, 79–110

BASIC THEOREMS OF THE THEORY OF PRE-ENDS FOR SPACE DOMAINS

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In the article, we present two constructions based on the theory of pre-ends for domains in the Euclidean space $\mathbb{R}^n$. The former, using factorization of a set, allows us to compactify every domain in $\mathbb{R}^n$ homeomorphic to a ball. Applying the latter, we obtain the Hausdorff completion of a domain. As a result, we establish some analogs of the Carathéodory theorem on the boundary behavior of quasi-isometries.

Key words and phrases: pre-ends, quasi-isometry, intrinsic metric, boundary element of a domain, extension of a mapping.

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Received
October 61, 1997

Translated into English:
Siberian Advances in Mathematics, V. 9, N 3, 86–114 (1999).