Mathematical Logic Quarterly 2006 vol.52 N6, pages 595-601

Quasi-completeness and functions without fixed-points

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Abstract

We prove a completeness criterion for quasi-reducibility and generalize it to higher levels of the arithmetical hierarchy. As an application of the criterion we obtain Q-completeness of the set of all pairs (x, n) such that the prefix-free Kolmogorov complexity of x is less than n. © 2006 WILEY-VCH Verlag GmbH & Co. KGaA.

http://dx.doi.org/10.1002/malq.200610017

Keywords

Computability, Functions without fixed-points, Pre-fix-free Kolmogorov complexity, Quasi-reducibility, The arithmetical hierarchy