

Illinois Journal of Mathematics 2008 vol.51 N4, pages 1189-1206

Q-degrees of n-C.E. sets

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Abstract

In this paper we study Q-degrees of n-computably enumerable (n-c.e.) sets. It is proved that n-c.e. sets form a true hierarchy in terms of Q-degrees, and that for any $n \geq 1$ there exists a $2n$ -c.e. Q-degree which bounds no noncomputable c.e. Q-degree, but any $(2n + 1)$ -c.e. non $2n$ -c.e. Q-degree bounds a c.e. noncomputable Q-degree. Studying weak density properties of n-c.e. Q-degrees, we prove that for any $n \geq 1$, properly n-c.e. Q-degrees are dense in the ordering of c.e. Q-degrees, but there exist c.e. sets A and B such that $A \not\leq B$