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Definable relations in Turing degree structures

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Abstract

In this paper we investigate questions about the definability of classes of n-computably enumerable (c. e.) sets and degrees in the Ershov difference hierarchy. It is proved that the class of all c. e. sets is definable under the set inclusion âŠ† in all finite levels of the difference hierarchy. It is also proved the definability of all m-c. e. degrees in each higher level of the hierarchy. Besides, for each level n, n ≥ 2, of the hierarchy a definable non-trivial subset of n-c. e. degrees is established. © 2014 Allerton Press, Inc.

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