

On a problem of Ishmukhametov

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Abstract

Given a d.c.e. degree d , consider the d.c.e. sets in d and the corresponding degrees of their Lachlan sets. Ishmukhametov provided a systematic investigation of such degrees, and proved that for a given d.c.e. degree $d > 0$, the class of its c.e. predecessors in which d is c.e., denoted as $R[d]$, can consist of either just one element, or an interval of c.e. degrees. After this, Ishmukhametov asked whether there exists a d.c.e. degree d for which the class $R[d]$ has no minimal element. We give a positive answer to this question. © 2013 Springer-Verlag Berlin Heidelberg.

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Keywords

d.c.e. sets, Lachlan sets, Turing degrees