

ESTIMATION OF ALGORITHMIC COMPLEXITY OF COMPUTABLE MODELS CLASSES

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In recent research of Goncharov and Knight [1] there was given a classification of of computable models classes with given theoretical-model properties on structural and antistructural.

In this paper I considered such a natural classes as: ω -categorical models, ω_1 -categorical, prime, homogenous, saturated models, models with strongly-minimal theories. Models are considered in predicate computable language. I gave precise, upper and lower estimations of complexity classes:

There are:

- 1) class of finite models is Σ_2^0 -complete.
- 2) classes of models with ω -categorical theories, prime models, homogenous models lies in $[\Sigma_\omega^0, \Pi_{\omega+2}^0]$ complexity interval.
- 3) class of models with ω_1 -categorical theories is in $[\Sigma_\omega^0, \Sigma_{\omega+1}^0]$ complexity interval.
- 4) class of saturated models is Σ_1^1 -complete.

The proofs contain a new approach of achieving lower bounds of $\wp^{(\omega)}$ complexity degrees, which uses Goncharov-Marker modified construction lowering complexity degree of model saving some model-theoretical properties [3].

REFERENCES

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RESEARCH HAS BEEN SUPPORTED BY GRANTS UR.04.01.198, NSH 4413.2006.1