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Classifying model-theoretic properties.
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In 2004 Csima, Hirschfeldt, Knight, and Soare [1] introduced nine predicates of a Turing degree A, one of which says that A computes a prime model of every complete atomic decidable theory. In general the nine predicates are of a wide variety, and come from different branches of mathematics including model theory, algebra, topology, and computability theory. In [1], the authors prove that the predicates are equivalent for Δ^0_2 sets A. We will give a complete classification [2] of the predicates in the general case when A is not necessarily Δ^0_2.

[1] B.F. Csima, D.R. Hirschfeldt, J.F. Knight, and R.I. Soare, *Bounding prime models*, ***Journal of Symbolic Logic***, vol. 69 (2004), no. 4, pp. 1117–1142.

[2] C.J. Conidis, *Classifying Model-Theoretic Properties*, ***Journal of Symbolic Logic***, vol. 73 (2008), no. 3, pp. 885–905.