

Decidability of the AE-theory of the Lattice of Π_1^0 Classes*

We discuss the proof that the AE-theory of $(\mathcal{L}(\Pi_1^0), \cap, \cup, 0, 1)^*$ is decidable, including a fragment of the theory shared with $(\mathcal{L}(\Pi_1^0), \cap, \cup, 0, 1)$. We provide a procedure which, for any AE-sentence in the language, determines the truth or falsity of the sentence in our structure.

(An AE-sentence is a sentence in prenex normal form with all universal quantifiers preceding all existential quantifiers, and the AE-theory of a structure is the set of all AE-sentences true in the structure.)

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