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Un système de déduction naturelle pour la Protothétique de Leśniewski

A Natural Deduction System for Leśniewski's Protothetic

Abstract: Stanisław Leśniewski's system called Protothetic is one of the most stimulating systems of propositional logic. Including quantification and a special rule for introducing definitions among its theorems, it is a powerful means for the study of many questions of logic and metalogic. In this paper we present how to obtain a version of Protothetic in the style of Jaśkowski-Fitch's natural deduction systems. Unlike Leśniewski's original system, which requires a fairly laborious learning process, the use of this new version, called PND, is accessible to anyone familiar with the well-known methods of natural deduction for propositional logic. We show that PND contains classical propositional logic and opens the possibility of developments of Protothetic in intensional logic.

Keywords: logic, natural deduction, Protothetic, Leśniewski

1. Préambule