



Constructing Truth-Tables in Propositional Multi-Valued Logics with DERIVE 4

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Abstract:

Producing truth-tables is very laborious but intuitive. The author presented at the 1st International Derive Conference (Plymouth, 1994) an approach to the Boolean case in DERIVE-2. It was published in The International DERIVE Journal. It was simple (it used vectors of vectors), but DERIVE-3 included a built-in function for the same purpose. An obvious extension is to construct truth-tables in multi-valued logics. The implementation presented here deals with Kleene's style (min/max) p-valued logic (for any integer $p > 1$) and it can build truth tables, check tautologies and check tautological consequences. It will be included in DERIVE-5.
