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14. Mathematical Aspects of Computer Science

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A verification of the Refal-programms

The verification of the Refal-proogramms is decided by logic languages: for the description of the semantics of the language Refal and for the proof of the conditions of verification of the refal-programs. Exists algorithm which finds out comparability of given input to the left parts of refal-rules. For any X $p(X, P(X))$ is true if and only if $[P, p](X)$ is executable. The program P is partial correctly if and only if for any X $Notf(X)Or[P, g](Y)$ is executable. The program P is total correctly if and only if for some X $f(X)And[P, g](X)$ is not executable. Reference: V. F. Turchin, Refal-5, Programming Guide and Reference manual, *New England publishing: Holyoke, Massachusetts* (1989)