

Algorithms Correctness and Efficiency

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Algorithms Correctness and Efficiency

Predicate calculus

Predicate calculus provides a richer representation language than propositional calculus:

It provides:

- objects and properties
- relationships between objects (functions)
- quantification (arrays)

Syntax

Logical symbols (static meaning)

- punctuation: $()$, $.$
- connectives: \neg (not), \wedge (and), \vee (or), \rightarrow (conditional), \forall (universal quantifier), \exists (existential quantifier), $=$ (equals)
- variables: x, y, z, x_1, y_1, z_1

Non logical symbols

- function symbols: *father*, *mother*, *sum*
- predicate symbols: *Man*, *Woman*, *Married*

Atomic Formulas

- terms
- every variable