

# Axioms of Predicate Calculus

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## Abstract

This module contains the axioms of predicate calculus. The following quantification axioms and these of [propositional calculus](#) (or [propositional calculus](#)) (together with some rules) allow the deduction of all theorems of predicate calculus. To learn about possible conclusions click through the following ‘.. used by..’ list.

This file is part of the project ‘Hilbert II’ see [project homepage](#).

## Specification

This document has the following specification:

Name:	predaxiom
Version:	1.00.00
Rule version:	1.00.00
Origin:	<a href="http://www.qedeq.org/0_00_53/predaxiom_1.00.00_1.00.00.qedeq">http://www.qedeq.org/0_00_53/predaxiom_1.00.00_1.00.00.qedeq</a>

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## Content

Axiom of Specialization:

**Axiom 0.1 (axiom5).**

$$\forall x R(x) \rightarrow R(y)$$

**Axiom 0.2 (axiom6).**

$$R(y) \rightarrow \exists x R(x)$$

**Rule Declaration 0.1 (predrule1).** *Rename Bound Variable*

For an explanation see [rename bound variable](#) or [rename bound variable \(o\)](#)

**Rule Declaration 0.2 (predrule2).** *Rename Free Variable*

For an explanation see [rename free variable](#) or [rename free variable \(o\)](#)

**Rule Declaration 0.3 (predrule3).** *Particularize*

For an explanation see [rename predicate variable](#) or [rename predicate variable \(o\)](#)

**Rule Declaration 0.4 (predrule4).** *Particularize*

For an explanation see [particularization](#) or [particularization \(o\)](#)

**Rule Declaration 0.5 (predrule5).** *Generalize*

For an explanation see [generalization](#) or [generalization \(o\)](#)

## 1 Cross Reference

This module is used by the following modules:

Name:	predtheo1
Version:	1.00.00
Rule version:	1.00.00
Orgin:	<a href="#">predtheo1_1.00.00_1.00.00.qedeq</a>
pdf:	<a href="#">predtheo1_1.00.00_1.00.00.pdf</a>
Name:	predtheo2
Version:	1.00.00
Rule version:	1.00.00
Orgin:	<a href="#">predtheo2_1.00.00_1.00.00.qedeq</a>
pdf:	<a href="#">predtheo2_1.00.00_1.00.00.pdf</a>
Name:	predtheo2
Version:	1.00.00
Rule version:	1.02.00
Orgin:	<a href="#">predtheo2_1.00.00_1.02.00.qedeq</a>
pdf:	<a href="#">predtheo2_1.00.00_1.02.00.pdf</a>