

Gödel's Incompleteness Theorems

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Table of Contents

Kurt Gödel

A quick reminder of Axioms

Definition (Axiom)

Statements that are true without a formal proof of them.

For example:

$$x = y \wedge y = z \implies x = z$$

"It is possible to draw a straight line from any point to any other point"

- Any mathematical system starts out with a set of axioms

Completeness

Definition (Complete)

A set of axioms is (syntactically, or negation-) complete if, for any statement in the axioms' language, that statement or its negation is provable from the axioms. [?]

References