

WISDOM'S GOLDENROD, ALAN BERKOWITZ CLASS NOTES
(TYPED)
JANUARY 29, 1982
SCIENCE; MATHEMATICAL LOGIC

TOPIC: Science

SUBJECT: Mathematical Logic

SUBSUBJECTS: Symbolic Logic, Leibniz

TYPED AND REFORMATTED by IT 2023

NOTES:

- **RETYPE HANDWRITTEN NOTES (hence V08).** From Classnotes AB 1982 0101 to 1982 0207.PDF.
- This event is among those in later 1981/early 1982 when Anthony was exploring Astrology/the Zodiacs, Cosmology, Physics, Logic, Astronomy, Soul, Nature, and The Grid: Gnostic and Fabricative.
- All spelling, capitalization, and punctuation corrected, abbreviations spelled out.

1982 01/29 at Wisdom's Goldenrod Science; Mathematical Logic

[Classnotes AB 1982 0129 Begin]

1/29/82 Symbolic Logic

Predicate logic is based on Leibniz's scheme (concept script).

p, q -- assertions

1. denial = $\neg$: $\neg p$ (it is not the case that p, or not p)

2. conjunction = and ($\wedge$): $p \wedge q$

3. disjunction = or ($\vee$): $p \vee q$

4. If-then = the conditional $p \rightarrow q$

If p then q, p implies q.

Combine to make a schema or form of a sentence.

$\neg p \rightarrow ((p \vee q) \rightarrow q)$

Any substitution in this case gives a true sentence.

Not p implies that if p or q is true, then q is true = a tautology (truths which are trivially true).

This sentence is universally true --

Two schemas are equivalent if they "mean" the same.

The truth value of a schema is not decided by substituting meanings for p's and q's but by constructing a truth table.

p	q	$p \wedge q$	$p \vee q$	$p \rightarrow q$
T	T	T	T	T
T	F	F	T	F
F	T	F	T	T
F	F	F	F	T

p	q	$p \vee q$	$p \wedge q$	$(p \vee q) \rightarrow (p \wedge q)$
T	T	T	T	T
T	F	T	F	F
F	T	T	F	F
F	F	F	F	T

[In reference to second table]: To solve for this [fifth column] first solve for its components [first four columns].

The language of predicate logic is adequate to express mathematics.

[Classnotes AB 1982 0129 End]