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paradox

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A *paradox* is an assertion that is apparently self-contradictory, though based on a valid deduction from acceptable premises.

Paradoxes typically lead to a reevaluation of the axioms of mathematics. after axioms are assumed so that the paradox is averted, the statement is still usually referred to as a paradox.

Occasionally, one may refer to a surprising result as a paradox. Such is the case in the birthday paradox, which is not apparently self-contradictory.

Examples of paradoxes include:

- Banach-Tarski paradox
- binary tree paradox
- <http://planetmath.org/BirthdayParadox> birthday paradox
- Burali-Forti paradox
- Cantor's paradox
- Hausdorff paradox
- Russell's paradox
- Simpson's paradox
- Zeno's paradox