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★The philosophy of set theory.

An introduction to Cantor's paradise.

Basil Blackwell, Oxford, 1989. x+239 pp. \$55.00.

ISBN 0-631-15285-7

This textbook, addressed to undergraduate students, is a serious attempt to fill a tremendous gap in the mathematical literature, in particular in the philosophy of mathematics. Among other issues, the author discusses an old philosophical question: Do mathematicians discover the rich and strange world of their discipline or do they create it?

By the subtitle "An introduction to Cantor's paradise", the author means the analysis and discussion of previous philosophical positions concerning the infinite. Although the treatise follows a chronological sequence, it does not attempt to discuss in detail the origins or development of Cantor's ideas.

The book is organized into nine chapters: The finite universe (Zeno's paradoxes); Aristotelian logic; Infinite cardinalities; Numbering the continuum; Cantor's paradise (arithmetic of transfinite

cardinal and ordinal numbers); Axiomatic set theory (Zermelo-Fraenkel); Logicism; Independence results; and, finally, Mathematical structure. It also contains a "further reading" section, a compact bibliography, a glossary of symbols and an index.

The book is very well written, the language is clear and the symbolism is precise and standard. Unfortunately, although it is not a requirement, the book does not incorporate into the perspective of its discussion some issues recently reanalyzed in historical articles (e.g., the origins of the paradoxes (pp. 114-117), and the origins of Zermelo's axiomatization of set theory (p. 118), among others).

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