

CAMBRIDGE

20% Discount *on this title*

Expires 13 March 2019

Model Theory and the Philosophy of Mathematical Practice

Formalization without Foundationalism

John T. Baldwin

University of Illinois, Chicago

Major shifts in the field of model theory in the twentieth century have seen the development of new tools, methods, and motivations for mathematicians and philosophers. In this book, John T. Baldwin places the revolution in its historical context from the ancient Greeks to the last century, argues for local rather than global foundations for mathematics, and provides philosophical viewpoints on the importance of modern model theory for both understanding and undertaking mathematical practice. The volume also addresses the impact of model theory on contemporary algebraic geometry, number theory, combinatorics, and differential equations. This comprehensive and detailed book will interest logicians and mathematicians as well as those working on the history and philosophy of mathematics.

Part I. Refining the Notion of Categoricity: 1. Formalization; 2. The context of formalization; 3. Categoricity; Part II. The Paradigm Shift: 4. What was model theory about?; 5. What is contemporary model theory about?; 6. Isolating tame mathematics; 7. Infinitary logic; 8. Model theory and set theory; Part III. Geometry: 9. Axiomatization of geometry; 10. π , area, and circumference of circles; 11. Complete: the word for all seasons; Part IV. Methodology: 12. Formalization and purity in geometry; 13. On the nature of definition: model theory; 14. Formalism-freeness; 15. Summation.

MODEL THEORY
AND THE
PHILOSOPHY OF
MATHEMATICAL
PRACTICE
FORMALIZATION WITHOUT
FOUNDATIONALISM
JOHN T. BALDWIN

January 2018

247 x 174 mm 384pp 8 b/w illus.

Hardback 978-1-107-18921-8

<i>Original price</i>	<i>Discount price</i>
£90.00	£72.00
\$120.00	\$96.00



www.cambridge.org/alerts
For the latest in your field

For more information, and to order, visit:

www.cambridge.org/9781107189218

and enter the code JBALDWIN2018 at the checkout

CAMBRIDGE
UNIVERSITY PRESS