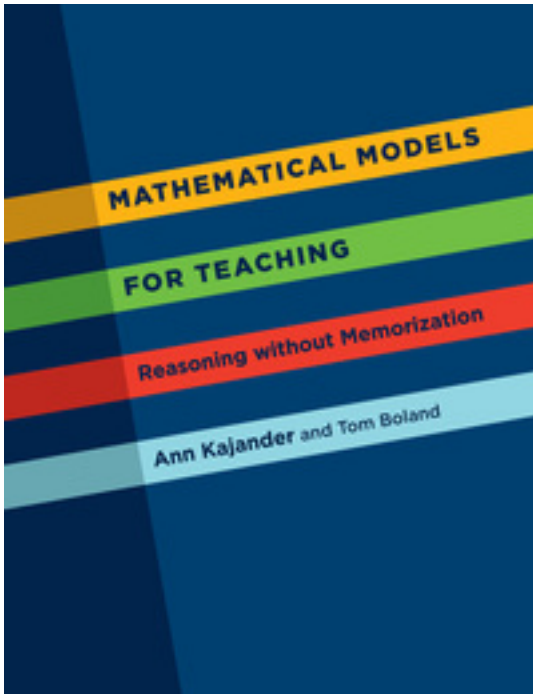


Mathematical Models for Teaching

Reasoning without Memorization



Subjects
Education

260 pages
8.5 x 11 inches
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Available at:
<https://www.canadianscholars.ca/books/mathematical-models-for-teaching>

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Students of mathematics learn best when taught by a teacher with a deep and conceptual understanding of the fundamentals of mathematics. In *Mathematical Models for Teaching*, Ann Kajander and Tom Boland argue that teachers must be equipped with a knowledge of mathematics for teaching, which is grounded in modelling, reasoning, and problem-based learning. A comprehensive exploration of models and concepts, this book promotes an understanding of the material that goes beyond memorization and recitation, which begins with effective teaching.

This vital resource is divided into 15 chapters, each of which addresses a specific mathematical concept. Focusing on areas that have been identified as problematic for teachers and students, *Mathematical Models for Teaching* equips teachers with a different type of mathematical understanding—one that supports and encourages student development. Features:

- grounded in the most current research about teachers' learning
- contains cross-chapter connections that identify common ideas
- includes chapter concluding discussion questions that encourage critical thinking
- incorporates figures and diagrams that simplify and solidify important mathematical concepts
- offers further reading suggestions for instructors seeking additional information

Author Information

Ann Kajander

****Ann Kajander**** is an experienced classroom teacher who is currently an Associate Professor in the Faculty of Education at Lakehead University. She is the author of two previous books of creative mathematical activities for children. Her research interests include mathematics education, pre-service education, teacher mathematics knowledge, the development of mathematics for teaching, and teacher beliefs.

Tom Boland

****Tom Boland**** is currently a Special Education Facilitator for Lakehead Public Schools, where he has taught grades 3 to 8. He has also been a professional learning consultant in mathematics for school boards across Canada, a provincial math coach for the Ontario Ministry of Education, and an instructor in the Faculty of Education at Lakehead University.

Reviews

"This book incorporates the latest research on how children learn mathematics. It fully embraces the idea that teachers learn mathematics best when framed in the context of their future role as teachers. It sends a strong message about the importance of developing conceptual understanding rather than encouraging rote memorization."— *Susan Oesterle, Department of Mathematics, Douglas College*

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