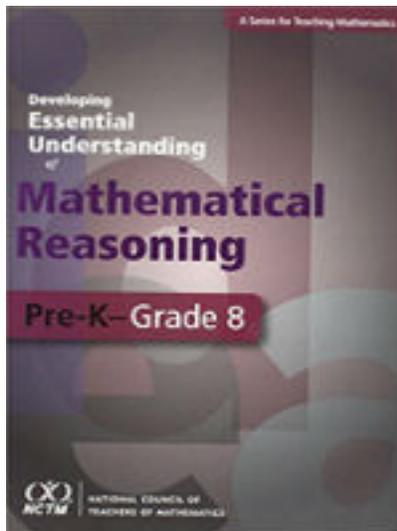


# Developing Essential Understanding of Mathematical Reasoning for Teaching Mathematics in Grades PreK-8

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## Description:

How do your students determine whether a mathematical statement is true? Do they rely on a teacher, a textbook, or various examples? How can you encourage them to connect examples, extend their ideas to new situations that they have not yet considered, and reason more generally?

How much do you know...and how much do you need to know?

Helping your students develop a robust understanding of mathematical reasoning requires that you understand this mathematics deeply. But what does that mean?

This book focuses on essential knowledge for teachers about mathematical reasoning. It is organized around one big idea, supported by multiple smaller, interconnected ideas essential understandings. Taking you beyond a simple introduction to mathematical reasoning, the book will broaden and deepen your mathematical understanding of one of the most challenging topics for students and teachers. It will help you engage your students, anticipate their perplexities, avoid pitfalls, and dispel misconceptions. You will also learn to develop appropriate tasks, techniques, and tools for assessing students' understanding of the topic.

Focus on the ideas that you need to understand thoroughly to teach confidently.



She has also coauthored numerous books, including: *Mathematics Coaching: Tools and Resources for Coaches and Leaders, K-12*; *Developing Essential Understanding of Addition and Subtraction for Teaching Mathematics in Pre-K-Grade 2, Math and Literature: Grades 6-8, Math and Nonfiction: Grades 6-8, and Navigating through Connections in Grades 6-8*. Jennifer served as member of Board of Directors for *TODOS: Equity for All*, as president of the Association of Mathematics Teacher Educators (AMTE), and editor for the 2012 NCTM Yearbook. Previous editions. *Teaching Student-Centered Mathematics: Grades K-3*. Van de Walle & Lovin. ©2006. Home » MAA Publications » MAA Reviews » *Teaching Essential Mathematics Grades K-8: Increasing Engagement and Building Understanding of Key Concepts*. Timothy J. McNamara. Publisher These bits of wisdom were valuable in making the reader understand that this type of engaging discovery of mathematics is necessary for student learning. As the author states, "it is in everyone's best long-term interest that less time be spent on how and more time be spent on why math is the way it is." It will help broaden and deepen your mathematical understanding of one of the most challenging topics for students and teachers to grasp. It will help you engage your students, anticipate their perplexities, help them avoid pitfalls, and dispel misconceptions. You will also learn to develop appropriate tasks, techniques, and tools for assessing your students understanding of the topic. Essential Understanding Series topics: *Number and Numeration for Grades Pre-K 2 Addition and Subtraction for Grades Pre-K 2 Geometry for Grades Pre-K 2 Reasoning and Proof for Grades Pre-K 8 Multiplication and D*