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**Math often feels like a play we've seen too many times—we know every twist and turn. Or so we thought. In *Math Decoded*, James Tanton takes us backstage, revealing surprising depth in even the most familiar concepts and shows us **not only new ways to understand mathematics, but also new ways to teach it more effectively.****



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# Math Decoded

## Explaining the Why Behind the Numbers and How They Operate

**James Tanton**

Mathematics often feels like a collection of disconnected rules, but what if you could uncover their underlying story? In *Math Decoded: Explaining the Why Behind the Numbers and How They Operate*, author James Tanton provides educators with a compelling and accessible guide to understanding the logic, purpose, and poetry behind numbers and arithmetic.

Move away from simply teaching formulas and procedures. Instead, discover the coherent and human story of mathematics that will enliven your classroom and deepen your own mathematical knowledge.

By addressing the “why” questions students frequently ask, this book offers clarity on tricky concepts such as dividing by zero, fractions, and negative numbers through these key features

- **Engaging Structure:** Each chapter begins with a thought-provoking question, explores real-world scenarios, and culminates in bold insights and classroom activities.
- **Grade-Banded Tasks:** Includes classroom activities for elementary to high school, ensuring relevance for multiple grade levels.
- **Comprehensive Resources:** Accompanied by videos, supplemental essays, and practical tools to deepen the learning experience.
- **Accessible Style:** Written in a friendly, relatable tone to explain mathematics' most mystifying and rigorous topics.

With this book, educators will gain a newfound appreciation for the beauty, structure, and coherence of mathematics. *Math Decoded* will help you inspire your students to see math not just as a subject, but as an invitation to explore, discover, and think deeply about the joy of numbers.