# What Your Colleagues Are Saying ...

"This is a powerful and readable guide to shifting our high school mathematics instruction toward maximizing our students' learning. But it's the clarity and familiarity of the challenges we all face when trying to implement these five practices—and the practicality and detail of the guidance provided in each chapter to address these challenges—that set this book apart and make it so useful for professional growth."

### Steve Leinwand

Researcher/Change Agent American Institutes for Research Washington, DC

"This book takes 5 Practices for Orchestrating Productive Mathematics Discussions to the next level as readers experience what these practices look like in real mathematics classrooms in high school. Readers will engage in analysis of videos and student work as they deepen their understanding of the five practices. The authors specifically address the challenges one might face in implementing the five practices in classrooms by providing recommendations and concrete examples to avoid these challenges."

> Cathy Martin Executive Director, Curriculum and Instruction Denver Public Schools Denver, CO

"Peg Smith has done it again. Building on her previous work with Mary Kay Stein (2018), Smith and coauthors Miriam Sherin and Michael Steele have taken the next step in supporting teachers to engage students in rich mathematics discussions. Filled with examples and insights, both in print and on video, this book allows teachers to 'see it in action,' make sense, and reflect on the challenges, and it provides support and guidance to implement the five practices in their own instruction. Perfect for teachers, teacher leaders, coaches, or others who support teachers in their instructional practices, this book literally connects theory to practice and provides honest and thoughtful reflections and guidance to work towards our ultimate goals—students' mathematics learning and agency."

### Cynthia H. Callard

Professor and Executive Director Center for Professional Development and Education Reform Warner Graduate School of Education and Human Development University of Rochester Rochester, NY

"The authors insightfully anticipate teachers' challenges and have designed a creative tool to support teacher learning. Their book is filled with highly practical reflective questions all tied to the five practices, enabling teachers to think for themselves. The result is a book that empowers high school teachers to determine the best ways to advance their own professional development to improve students' mathematical lives."

Ruth M. Heaton Chief Executive Officer Teachers Development Group West Linn, OR "This book is packed with practical guidance, support, and actual footage of what it looks like to enact ambitious teaching through these practices. If there's a teacher or leader out there wondering how to ensure their classroom embraces ambitious teaching that is empowering and equitable, this is your guide. Read it. Practice it. Make it yours. There just isn't anything else out there pushing us to think and act as strategically in our math classrooms like this does."

### Levi J. Patrick

Assistant Executive Director of Curriculum and Instruction Oklahoma State Department of Education

"At Illustrative Mathematics we were looking for a framework that would enable us to embed in our curriculum ambitious but achievable goals for teacher practice. The five practices was the perfect fit: a memorable, learnable set of principles that could be used by novice and veteran teachers alike to get their students thinking and sharing their reasoning."

### **Bill McCallum**

President, Illustrative Mathematics University Distinguished Professor of Mathematics University of Arizona

"One of the biggest struggles I faced when teaching high school mathematics was finding a way to teach students through problem solving. After multiple lesson flops, I was beginning to think that teaching through task was just not something that was possible for me and my students. When I first read *The 5 Practices For Orchestrating Productive Mathematics Discussions*, I now knew *what* specifically I had been overlooking and *why* I was struggling, but it took me years of practice to start to understand *how* to implement these practices effectively and consistently. Now, high school math teachers have the benefit of being able to unpack the *what*, *why*, AND the *how* with *The 5 Practices In Practice: Successfully Orchestrating Mathematics Discussions in Your High School Classroom* book and multimedia resources to begin transforming how you do business in your math class right now."

## Kyle Pearse

K-12 Mathematics Consultant Belle River, Ontario

"Insightful, go-to handbook for high school math class. This book addresses many questions and challenges I had while implementing the 5 practices into my high school classroom. The insightful examples give me a window into learning how to effectively apply the 5 practices so I can teach ambitiously so that my students deepen their understanding and enjoyment of mathematics."

### Jon Orr

High School Math Teacher John McGregor Secondary School Chatham, Ontario "The Five Practices in Practice: Successfully Orchestrating Mathematics Discussion in Your High School Classroom makes the five practices accessible for high school mathematics teachers. Teachers will see themselves and their classrooms throughout the book. High school mathematics departments and teams can use this book as a framework for engaging professional collaboration. I am particularly excited that this book situates the five practices as ambitious and equitable practices."

### Robert Q. Berry, III

NCTM President 2018–2020 Samuel Braley Gray Professor of Mathematics Education University of Virgina

"The five practices can help high school students express their thinking, make connections, and form deep mathematical connections. In the *Five Practices in Practice: High School*, the authors bring the practices to life, including video clips showing how teachers respond to student thinking in real time."

Carl Oliver Assistant Principal City-As-School High School New York, NY

"*The Five Practices in Practice* is a valuable tool for teacher teams who are ready to dig into the challenging work of collaboratively planning lessons that engage all students in learning rigorous mathematics through high-quality tasks and rich discourse."

Jennifer Lawler Coordinator of Mathematics Kenosha Unified School District Kenosha, WI

"This book is an amazing resource. The five (six) practices are illustrated through classroombased examples in a way that they come alive. As a reader, I can see the practices, I can make sense of them, and I feel supported to implement them thanks to the different resources provided (e.g., examples of tasks and questions, reflection prompts, teachers' testimonials, video clips). The book is organized in such a way that there is something for everyone, from the single teacher who wants to work on implementing the practices, to a group of teachers in a book study-group, or the teacher educator working with prospective teachers. I can even see using it as part of a professional learning community with college faculty teaching introductory mathematics courses."

### Marta Civil

Professor of Mathematics Education Roy F. Graesser Endowed Chair University of Arizona "When coaches, teachers, and supervisors are asked, "What should mathematical discourse look like in my classroom?" they now have a ready answer. *The Five Practices in Practice for Your High School Classroom* not only gives an in depth explanation of what the five practices are and why they are important, but also gives classroom examples, vignettes, and access to videos so practitioners can see exactly what it is they should be doing in classes. This book is an essential resource for all educators – showing the practices in high school classrooms, as well as detailing what educators should know about their efficacy."

### **Fredrick Dillon**

Mathematics Fellow, Institute for Learning, University of Pittsburgh High School Mathematics Teacher (35 years) Presidential Awardee for Excellence in Mathematics and Science Teaching

"This book builds a deeper understanding of the 5 Practices for Orchestrating Productive Discussions in high school classrooms. In addition to an extensive analysis of each practice, the book takes you into the classroom to explore common challenges enacting each one and how to avoid/overcome them through video clips, cases, and teacher commentary. It provides a plethora of examples from actual lessons, accompanied by thought-provoking questions for reflection, analysis, and improved implementation. Whether you are new to or experienced with the 5 practices, this book will give you valuable insights into how to orchestrate productive discussions in you classrooms that advance the mathematics learning of each and every student. A must-read."

Diane Briars Past President, NCTM (2014–2016) Pittsburgh, PA

"When I was a preservice teacher, the 5 Practices set the foundation for how I wanted to teach. Years later, the 5 Practices are still the most meaningful tools I use to design and facilitate lessons. I am thrilled that a new book has come out, packed with more vignettes, reflection questions, and lessons learned. I cannot wait to see how this book will help hone my craft as an orchestrator of mathematical discussion."

> Chris Nho Mathematics Teacher High Tech High San Diego, CA