



2018-2019 Mathematics Workshops

For Middle School Teachers

arranged by Joseph G. Rosenstein and Neil D. Cooperman

sponsored by the Association of Mathematics Teachers of New Jersey (AMTNJ)

with the cooperation of DIMACS, the Center for Discrete Mathematics and Theoretical Computer Science,

and the Rutgers Department of Mathematics

Overview:

Would you like to:

- Better prepare your students for NJ's statewide assessments?
- Engage your students in the lessons that you teach?
- Learn more mathematics content that is relevant to your classroom?
- Incorporate standards-based hands-on activities that motivate your students?
- Relate what you are doing in the classroom to "real world" applications?

Twenty-six, highly interactive, one-day professional development workshops for middle school math teachers are offered during the 2018-2019 school year. These workshops address a broad range of topics that are applicable to all curricula taught by grades 6-8 teachers of mathematics.

These workshops are sponsored by the [Association of Mathematics Teachers of New Jersey](#) (AMTNJ) with the cooperation of [DIMACS](#) (the Center for Discrete Mathematics and Theoretical Computer Science) and the [Rutgers Department of Mathematics](#).

All workshops are connected to New Jersey's state standards in mathematics. All of these workshops will help you better prepare students for the statewide assessments and provide the resources and knowledge that you need to generate new and exciting standards-based lessons.

All workshops are full-day workshops at which participants will earn six (6) professional development hours. All workshops will take place on the Busch Campus of Rutgers University-New Brunswick. Participants may attend single or multiple workshops in any order.

The fee for each full-day workshop is \$205 (\$10 discount for each online registration). Discounts are available for multiple registrations on a single purchase order. Workshop registrations include eMembership in AMTNJ through December 31, 2019.

Although some workshops address overlapping issues, teachers who attend multiple workshops will benefit from experiencing the different approaches workshop leaders have to helping students meet the challenges of the state

standards and assessments. Our instructors are among the most experienced and respected workshop leaders in the state. The workshop topics are based on feedback and recommendations from New Jersey teachers and administrators.

You will leave these workshops with valuable tools to motivate your students, stimulate their curiosity, and promote a more positive attitude towards mathematics.

Workshop Titles (in chronological order):
(scroll down for workshop descriptions, in alphabetical order)
(all workshops begin at 9:00 am)

- **Standards for Mathematical Practice, Grades 5-8**
Date: Thursday, November 1, 2018 (Code: W-11-01-18) **Postponed to January 24, 2019**
Presenter: Judith T. Brendel
- **Mathematics and Art: Perfect Together: Don't Teach Art Instead of Math, Teach Math with Art!, Grades 6-10**
Date: Thursday, November 15, 2018 (Code: W-11-15-18) **Postponed to February 5, 2019**
Presenter: Judith T. Brendel
- **Do Your Students Persevere in Solving Problems?, Grades 6-10**
Date: Monday, November 26, 2018 (Code: W-11-26-18)
Presenter: Debra Gulick
- **Tips for Math Coaches, Math Supervisors, and Math Leaders, Grades K-12**
Date: Wednesday, November 28, 2018 (Code: W-11-28-18)
Presenter: Angelo DeMattia
- **Flipping the Math Classroom, Grades 6-12**
Date: Friday, December 7, 2018 (Code: W-12-07-18)
Presenter: Jennifer Goforth
- **Intervention Strategies for Struggling Learners in Mathematics, Grades 6-9**
Date: Thursday, December 13, 2018 (Code: W-12-13-18)
Presenter: Irina Lyublinskaya
- **Is That Your Final Answer? Developing Mathematical Thinking with Questions, Grades 6-12**
Date: Friday, December 14, 2018 (Code: W-12-14-18)
Presenter: Robin Schwartz
- **Nothing but Desmos, Grades 8-12**
Date: Monday, January 7, 2019 (Code: W-01-07-19)
Presenter: Eric Milou
- **SAT and CCS, Grades 6-12**
Date: Thursday, January 17, 2019 (Code: W-01-17-19)
Presenter: Laura Champion
- **A Visual-Spatial Approach to Achieving Success in Algebra, Grades 7-8**
Date: Wednesday, January 23, 2019 (Code: W-01-23-19)
Presenter: Angelo DeMattia

- **Algebra: an Equity Issue, Grades 3-12**
Date: Wednesday, January 30, 2019 (Code: W-01-30-19)
Presenter: Debra Gulick
- **Math Modeling, Grades 6-10**
Date: Monday, February 11, 2019 (Code: W-02-11-19)
Presenter: Jennifer Martins and John Kerrigan
- **Fraction and Decimal Concepts and Their Calculation, Grades 3-5**
Date: Thursday, February 14, 2019 (Code: W-02-14-19)
Presenter: Makoto Yoshida
- **Project Based Learning for Algebra Students, Grades 7-9**
Date: Friday, February 15, 2019 (Code: W-02-15-19)
Presenter: Nicole Ealey
- **Formative Assessment, Productive Struggle, and Student Discourse, Grades 6-12**
Date: Tuesday, February 19, 2019 (Code: W-02-19-19)
Presenter: Neil D. Cooperman
- **Using Technology in the Math Classroom, Grades 7-12**
Date: Wednesday, February 20, 2019 (Code: W-02-20-19)
Presenter: Dianna M. Sopala
- **Using Data in a Mathematics Classroom to Drive Instruction, Grades 7-12**
Date: Thursday, February 21, 2019 (Code: W-02-21-19)
Presenter: Dianna M. Sopala
- **Geometry Investigations with GeoGebra, Grades 6-8**
Date: Tuesday, March 12, 2019 (Code: W-03-12-19)
Presenter: Irina Lyublinskaya
- **Empowering Students Who Ask, "When Are We Ever Going to Use This Math?," Grades 6-12**
Date: Thursday, March 28, 2019 (Code: W-03-28-19)
Presenter: Robin Schwartz
- **Differentiating Instruction in Math: "It's not as hard as you think!", Grades 5-8**
Date: Tuesday, April 16, 2019 (Code: W-04-16-19)
Presenter: Judith T. Brendel
- **Making Meaning of Fractions, Grades 3-5**
Date: Tuesday, April 23, 2019 (Code: W-02-23-19)
Presenter: Mark Russo
- **Memorable Hands-On Activities for the Middle School Classroom, Grades 5-8**
Date: Friday, April 26, 2019 (Code: W-04-26-19)
Presenter: Coshetty Vargas
- **Everyday Applications of Mathematics, Grades 8-12**
Date: Monday, April 29, 2019 (Code: W-04-29-19)
Presenter: Joseph G. Rosenstein

- **Number Sense, Fluency, & Operations in the K-5 Classroom, Grades K-5**
Date: Wednesday, May 1, 2019 (Code: W-05-01-19)
Presenter: Debra Gulick
- **Simple Hands-on Activities for Sixth through Ninth Grade Math Students, Grades 6-9**
Date: Friday, May 3, 2018 (Code: W-05-03-19)
Presenter: Ira Nirenberg
- **Understanding Quadratics: Analyzing Data, Writing Equations, and Modeling with Technology, Grades 6-12**
Date: Friday, May 10, 2019 (Code: W-05-10-19)
Presenter: Kathleen Carter

Workshop Descriptions (in alphabetical order):

- **Algebra: an Equity Issue, Grades 3-12**

Date: Wednesday, January 30, 2019 (Code: W-01-30-19)
Time: 9:00 am – 3:30 pm
Presenter: Debra Gulick
Audience: Grades 3-12 Mathematics Teachers and Supervisors

Algebra appears as a standard at every grade level from 1 through high school. This session will address what algebraic thinking looks like at the elementary level, and why what happens in the elementary classroom is critical to the success of all students in future years. This session will also explore algebra in the middle school and the algebra content in the grade eight standards. Algebra is not just a course, it's an entire way of thinking and asking questions that spans grade levels.

- **Differentiating Instruction in Math: "It's not as hard as you think!", Grades 5-8**

Date: Tuesday, April 16, 2019 (Code: W-04-16-19)
Time: 9:00 am – 3:30 pm
Presenter: Judith T. Brendel
Audience: Grades 3-12 Mathematics Teachers and Supervisors

How can we, as caring, dedicated professional educators, teach students at different levels of understanding and backgrounds at the same time? Can we realistically meet the needs of each student while meeting expectations of NJSL (New Jersey Student Learning Standards)? Have fun while you learn and experience a range of effective instructional and learning strategies with specific activities to keep ALL students motivated, engaged, learning and succeeding. Yes, we can meet their needs. Leave with a wealth of ready-made original material to use now and with digital access to modify later. Participants are encouraged to bring a digital device such as a laptop or tablet.

- **Do Your Students Persevere in Solving Problems?, Grades 6-12**

Date: Monday, November 26, 2018 (Code: W-11-26-18)
Time: 9:00 am – 3:30 pm
Presenter: Debra Gulick
Audience: Grades 6-12 Mathematics Teachers, Mathematics Supervisors

Algebra appears as a standard at every grade level from 1 through high school. This session will address what algebraic thinking looks like at the elementary level, and why what happens in the elementary classroom is critical to the success of all students in future years. This session will also explore algebra in the middle school and the algebra

content in the grade eight standards. Algebra is not just a course, it's an entire way of thinking and asking questions that spans grade levels.

- **Empowering Students Who Ask, "When Are We Ever Going to Use This Math?," Grades 6-12**

Date: Thursday, March 28, 2019 (Code: W-03-28-19)

Time: 9:00 am – 3:30 pm

Presenter: Robin Schwartz

Audience: Grade 6-12 Mathematics Teachers, Mathematics Supervisors

When Math is presented as a life skill that broadens career choice and inspires critical thinking, students embrace the learning of reasoning and problem-solving skills while building confidence and persistence. While many students will not major in science or engineering in college, all students benefit from the challenge and discipline of Math. This positive attitude can help teachers, administrators and students to meet the challenges of “teaching to the test” by viewing it as an opportunity to address common errors and misunderstandings without formally reviewing. In fact, the comparison of multiple-choice answers can help students to “think on their feet” while increasing accuracy, logic and frustration tolerance skills – assets in high school, college and the workplace. Worksheets will cover common secondary content incorporating HSPA and SAT content (including algebra, geometry, trig and precalc) and will use multiple representations and technology to appeal to diverse learning styles creating a path to success for all.

- **Everyday Applications of Mathematics, Grades 8-12**

Date: Monday, April 29, 2019 (Code: W-04-29-19)

Time: 9:00 am – 3:30 pm

Presenter: Joseph G. Rosenstein

Audience: Grades 8-12 Mathematics Teachers, Mathematics Supervisors

We are all exposed to modern applications of mathematics every day – lotteries, weather forecasts, internet searches, social networks, credit card security, redistricting, reapportionment (after the 2020 census), optimal delivery routes, statistical charts, the list goes on and on – but we don't prepare our students to understand these applications because we focus on preparing them all for calculus, although 88% of them will not pursue STEM fields that require calculus. We also want our students to become problem-solvers and reasoners, since those skills are required in almost all professions, yet we instead focus on solving algebraic problems that are only useful for calculus. This session will focus on areas of mathematics that all of our students could use to help them navigate the modern everyday world.

- **Flipping the Math Classroom, Grades 6-12**

Date: Friday, December 7, 2018 (Code: W-12-07-18)

Time: 9:00 am – 3:30 pm

Presenter: Jennifer Goforth

Audience: Grades 6-12 Mathematics Teachers, Mathematics Supervisors

Are you looking for ways to integrate technology in the classroom effectively? Do you want to increase the number of students completing homework? Then Flipping the Classroom may be a strategy you want to implement in your classes. This workshop will provide a framework for flipped learning- where students watch instructional videos for homework and do the practice in class.

- **Formative Assessment, Productive Struggle, and Student Discourse, Grades 6-12**

Date: Tuesday, February 19, 2018 (Code: W-02-19-19)

Time: 9:00 am – 3:30 pm

Presenter: Neil D. Cooperman

Audience: Grades 6-12 Mathematics Teachers, Mathematics Supervisors

Sitting quietly, taking careful and assiduous notes, and being abjectly attentive only works for about one-third of our students. Far more of our students can understand and retain the learning if they are engaged in a dynamic and interactive classroom environment. This session will explore techniques and strategies that will help you to transform

your classroom, reduce your workload, and improve your students' results through enhanced pedagogical approaches that address the Mathematical Practices.

- **Fraction and Decimal Concepts and Their Calculation, Grades 3-6**

Date: Thursday, February 14, 2019 (Code: W-02-14-19)
Time: 9:00 am – 3:30 pm
Presenter: Makoto Yoshida
Audience: Grades 3-5 Mathematics Teachers and Supervisors

Expectations for teaching fractions and decimals as given in the Common Core State Standards for Mathematics (CCSS-M) and many CCSS-based state standards are very different from previous standards. In this session, teachers will learn how to teach fractions and decimals within a focused and coherent instructional sequence of content and activities. Teachers will learn how to teach important concepts such as unit fractions, equivalent fractions, and calculations (addition, subtraction, multiplication, and division) to help students understand the content deeply.

- **Geometry Investigations with GeoGebra, Grades 6-8**

Date: Tuesday, March 12, 2018 (Code: W-03-12-19)
Time: 9:00 am – 3:30 pm
Presenter: Irina Lyublinskaya
Audience: Grades 6-8 Mathematics Teachers, Mathematics Supervisors

Come to learn how you can use GeoGebra in your classes to address geometry and measurement standards.. This free multi-platform software/APP will engage your students in dynamic explorations, problem solving, and doing math!

- **Intervention Strategies for Struggling Learners in Mathematics, Grades 6-9**

Date: Thursday, December 13, 2018 (Code: W-12-13-18)
Time: 9:00 am – 3:30 pm
Presenter: Irina Lyublinskaya
Audience: Grades 6-9 Mathematics Teachers, Mathematics Supervisors

In this workshop participants will learn about specific research-based recommendations to address the needs of struggling learners in math; discuss how to carry out each recommendation; review examples illustrating specific intervention strategies for different recommendations, and develop strategies based on these recommendations for teaching specific topics of middle and high school mathematics.

- **Is That Your Final Answer? Developing Mathematical Thinking with Questions, Grades 6-12**

Date: Friday, December 14, 2018 (Code: W-12-14-18)
Time: 9:00 am – 3:30 pm
Presenter: Robin Schwartz
Audience: Grades 6-12 Mathematics Teachers, Mathematics Supervisors

Asking questions such as “Is that your final answer?”, “How do you know?” and “Easy, Medium, Hard?” encourages students to increase their self-awareness along with their math confidence, performance, and comprehension. This workshop will include CCSS Standards especially #1 (make sense of problems and persevere in solving them) and #6 (attend to precision). We will design and demo inquiries using PARCC samples and other released items to inspire classroom dialogue, lesson plans and student learning.

- **Making Meaning of Fractions, Grades 3-5**

Date: Tuesday, April 23, 2019 (Code: W-04-23-19)
Time: 9:00 am – 3:30 pm

Presenter: Mark Russo

Audience: Grades 3-5 Mathematics Teachers, Mathematics Supervisors

This session will focus on the grades 3 - 5 fractions standards. We will discuss how to introduce key fractional ideas to students in a way that helps them make meaning for themselves, by connecting new ideas with prior knowledge. We will explore manipulatives and technology, discuss multiple ways to discover standard algorithms, and consider multiple representations as a tool to strengthen understanding.

- **Math Modeling, Grades 6-10**

Date: Monday, February 11, 2019 (Code: W-02-11-19)

Time: 9:00 am – 3:30 pm

Presenters: Jennifer Martins and John Kerrigan

Audience: Grades 6-10 Mathematics Teachers and Supervisors

This workshop will focus on strategies to infuse math modeling regularly into the math classroom. Incorporating math modeling into your daily routine motivates and engages students, provides them with choice, and helps them make sense of problems taking abstract concepts and putting them into a finite model. You will leave this workshop with learning activities that you can implement into your classroom the very next day. Come spend the day and model with us.

- **Mathematics and Art: Perfect Together: Don't Teach Art Instead of Math, Teach Math with Art!, Grades 6-10**

Date: Tuesday, February 5, 2019 (Code: W-02-05-19)

Time: 9:00 am – 3:30 pm

Presenter: Judith T. Brendel

Audience: Grade 6-10 Mathematics Teachers and Supervisors

This hands-on workshop is designed for teachers of mathematics with or without any particular visual-arts skills. See what arts-integration looks and how it will improve your student's understanding of math concepts? Visual art activities, lessons, and projects: Experience: (1) simple projects done in your math class that will develop critical thinking skills; (2) activities that address relevant Math Process and Content Standards; (3) student success; see the increase in self-esteem and willingness to persevere; (4) problem solving creatively in pairs, groups or teams; (5) use of effective rubrics, and (6) online free-resources for use in class or at home. Participants are encouraged to bring a digital device such as a laptop or tablet.

- **Memorable Hands-On Activities for the Middle School Classroom, Grades 5-8**

Date: Thursday, April 26, 2019 (Code: W-04-26-19)

Time: 9:00 am – 3:30 pm

Presenter: Coshetty Vargas

Audience: Grades 6-12 Mathematics Teachers and Supervisors

Explore the different areas of common core standards by using hands on manipulatives to engage students in your math lessons in a fun memorable way. Apply Algebra, Geometry, Number Sense, Ratios, Proportions, Data and Probability by using basic materials such as post its, spaghetti, marbles, sugar cubes, skittles, monopoly boards... to name a few.

- **Nothing But Desmos, Grades 8-12**

Date: Thursday, January 7, 2019 (Code: W-01-07-19)

Time: 9:00 am – 3:30 pm

Presenter: Eric Milou

Audience: Grades 8-12 Mathematics Teachers and Supervisors

Come enjoy this workshop on the free online graphing calculator desmos. We will explore all of its features from

animating objects and functions, creating lessons and assessments (on teacher.desmos), working with the new desmos geometry platform and even exploring the link between art and math.

- **Number Sense, Fluency, & Operations in the K-5 Classroom, Grades K-5**

Date: Wednesday, May 1, 2019 (Code: W-05-01-19)

Time: 9:00 am – 3:30 pm

Presenter: Debra Gulick

Audience: Grades 6-12 Mathematics Teachers, Mathematics Supervisors

During this session, we will explore ways to build number sense by building routines that ask students to take risks. Students build their number sense by estimating and revising their estimates with pictures, video, measurement and operations. Additionally we will connect the visual and verbal representations of various addition, subtraction, multiplication and division algorithms, traditional and others, and understand how they are all connected. Strategies for communicating with parents will be shared.

- **Project Based Learning for Algebra Students, Grades 7-9**

Date: Friday, February 15, 2019 (Code: W-02-15-19)

Time: 9:00 am -- 3:30 pm

Presenter: Nicole Ealey

Audience: Grades 7-9 Mathematics Teachers and Supervisors

Thinking of new ways to implement inquiry based learning in your Algebra I classroom? This workshop will help to prepare Algebra I teachers to create and implement Project Based Learning in their classrooms. Project Based learning is a student centered pedagogy that involves a dynamic classroom approach in which it is believed that students acquire a deeper knowledge through active exploration of real-world challenges and problems. Participants will explore the 4C's-Collaboration, Communication, Creativity, and Critical Thinking and develop lessons and tools to implement these skills in their everyday teaching. This workshop is ideal for Algebra I teachers.

- **SAT and CCS, Grades 6-12**

Date: Thursday, January 17, 2019 (Code: W-01-17-19)

Time: 9:00 am – 3:30 pm

Presenter: Laura Champion

Audience: Grades 6-12 Mathematics Teachers and Supervisors

Gone are the days of "SAT words" and math strategies that have no connection to the school curriculum! The "new" SAT (as of March 2016) is very much aligned to the Common Core Standards. With increased emphasis on word problems in science and social studies contexts, the SAT offers well-written problems specifically designed to test skills that students will need in college and careers. See how you can use SAT problems and free test materials on the College Board website as resources in your classroom. Topics range from percents, ratios, and proportions to linear, quadratic, and exponential equations, to geometry and trigonometry. Please bring a charged laptop.

- **Simple Hands-on Activities for Sixth through Ninth Grade Math Students, Grades 6-9**

Date: Thursday, May 3, 2019 (Code: W-05-03-19)

Time: 9:00 am – 3:30 pm

Presenter: Ira Nirenberg

Audience: Grades 6-9 Mathematics Teachers, Mathematics Supervisors

It's been said that the definition of insanity is to keep doing the same thing over and over again but expecting different results. Ready to try something different? In this workshop, rather than beginning with definitions, formulas, and equations, we begin with hands-on activities that inspire those definitions, formulas, and equations. Let's stop putting the cart before the horse. Most middle and high school mathematics begins with an abstraction; we write down a ratio, and then go through some kind of mathematical manipulation (perhaps we cross multiply) to arrive at an answer. We draw lines and begin talking about slope and intercept. We show students how to "solve" word problems. We give

students formulas that appear out of the blue. How well have these approaches worked for you? If they haven't been as effective as you've wished, join us for something a bit different. Please bring a calculator!

- **Standards for Mathematical Practice, Grades 5-8**

Date: Thursday, January 24, 2019 (Code: W-01-24-19)

Time: 9:00 am – 3:30 pm

Presenter: Judith T. Brendel

Audience: Grades 5-8 Mathematics Teachers, Mathematics Supervisors

It sounds like just another education buzzword, but it's so much more. When it comes to the Common Core State Standards, standards for mathematical practice describe the very foundation of what CCSS are all about: helping students achieve at a higher level. In this workshop you will not only become familiar with these eight practice standards; for each standard you will also experience teaching strategies + activities and resources for students that will enforce and enrich their understandings and success in learning. It's not just about content! Apply new strategies to material you already have, practice to better understand expectations, and receive new grade-specific resources to use with your students throughout the year.

- **Tips for Math Coaches, Math Supervisors, and Math Leaders, Grades K-12**

Date: Wednesday, November 28, 2018 (Code: W-11-28-18)

Time: 9:00 am – 3:30 pm

Presenter: Angelo DeMattia

Audience: Grades K-12 Mathematics Teachers, Mathematics Supervisors

How can Math teachers be supported on their journey to provide quality learning for their students? This workshop will help participants explore various support structures that will help attain the above goal. If you are new to math leadership, this session helps clarify this enormous task and helps to gain confidence as where to begin – especially in supporting teachers in the implementation of the mathematical practices and understanding the intent of conceptual understanding and how it supports retention and procedural fluency. If you are experienced, this session will help you rethink the menu and your training. Ultimately, you will improve as a knowledgeable practitioner, capable of using your extensive math understanding and teaching experiences to help children from varied cultural backgrounds become convincing mathematicians. Time will be reserved for sharing leadership dilemmas, solutions, and ideas, as well as examining effective math lessons.

- **Understanding Quadratics: Analyzing Data, Writing Equations, and Modeling with Technology, Grades 6-12**

Date: Friday, May 10, 2019 (Code: W-05-10-19)

Time: 9:00 am – 3:30 pm

Presenter: Kathleen Carter

Audience: Grades 6-12 Mathematics Teachers, Mathematics Supervisors

This session will analyze Quadratic Functions in its various representations to help students understand the characteristics of quadratic relationships. First, the behavior of quadratic number patterns will be analyzed to facilitate writing recursive and explicit formulas. Then, the characteristics of the graph of the parent function will be discussed as a foundation for the exploration of transformations. The different forms of the equations of quadratics will be compared for purposes of graphing and modeling quadratic relationships. The session will also demonstrate how the Desmos online graphing calculator can be incorporated to stimulate classroom discussion and analysis of quadratics. Modeling with quadratics using the graphing calculator and Desmos will be presented. Please bring a laptop or tablet to participate in the Desmos part of the presentation and a graphing calculator.

- **Using Data in a Mathematics Classroom to Drive Instruction, Grades 7-12**

Date: Thursday, February 21, 2019 (Code: W-02-21-19)

Time: 9:00 am – 3:30 pm

Presenter: Dianna M. Sopala

Audience: Grades 7-12 Mathematics Teachers and Supervisors

How can we use our formative assessments to drive instruction? In this workshop, participants will review some formative assessments that assist teachers in data analysis. Then they will use the data to readjust lessons. Participants must bring their laptops.

- **Using Technology in the Math Classroom, Grades 7-12**

Date: Wednesday, February 20, 2019 (Code: W-02-20-19)

Time: 9:00 am - 3:30 pm

Presenter: Dianna M. Sopala

Audience: Grades 7-12 Mathematics Teachers, Mathematics Supervisors

Participants will effectively integrate technology in the math classroom. We will explore Desmos, GeoGebra, Khan Academy, and other applications. Personalized learning is easier with technology. All participants should bring their charged laptops.

- **A Visual-Spatial Approach to Achieving Success in Algebra, Grades 7-8**

Date: Wednesday, January 23, 2019 (Code: W-01-23-19)

Time: 9:00 am - 3:30 pm

Presenter: Angelo DeMattia

Audience: Grades 7-12 Mathematics Teachers, Mathematics Supervisors

There is a need to increase the number of students that can demonstrate a deep conceptual understanding of algebraic relationships. This workshop will assist teachers in developing more visually based lessons that highlight spatial thinking. Research has shown that spatial thinking is a predictor of success in STEM, and that this emphasis will create opportunities for students, including SE & ELL - to make an effective transition from the concrete/visual to the abstract. The emphasis will be on applying the PAW process: P is for Pictures, A is for Algebra, and W is for words. Ample hands-on lessons will highlight the process that helps teachers to help students attain a higher level of achievement on PARCC Assessments as well as to gain a better understanding of the Common Core Standards. Time will also be reserved for Desmos explorations as well as your questions/concerns. Bring a laptop and graphing calculator.

Registration Information

PAYMENT INFORMATION

To encourage implementation at your school, we are offering discounts to schools or districts that send multiple registrations on a single purchase order and to individuals who sign up for four (4) or more workshops.

1-3 Workshop Registrations = \$205 each

4-9 Workshop Registrations (one or more individuals) = \$175 each (15% discount)

10 or more Workshop Registrations (one or more individuals) = \$155 (25% discount)

THERE IS A \$10 DISCOUNT FOR EACH ONLINE REGISTRATION.

Workshop fees include all materials.

Payment may be made by purchase order or personal check; purchase orders and/or checks should be made out to **AMTNJ (Association of Mathematics Teachers of NJ)** and mailed to the address below. Admittance to the workshop may be denied if no payment method is submitted by the day of the workshop or if billing information is not completed.

Registration Information

You can register by:

Phone: (732) 788-1257 from Monday through Friday, from 9:30 a.m. to noon.

Online: <http://tinyurl.com/AMTNJ-DIMACS-2017-2018>

FAX: FAX Registration Form to (732) 399-5388, 24-hours a day.

Mail: Send Registration Form to:

AMTNJ/DIMACS K-12 Math Workshops
PO Box 264
Bay Head, NJ 08742

Once your registration is received, you will receive an email confirmation letter at least 10 days before your workshop; attached to this letter will be a map, directions, and parking information.

If you have not received a confirmation letter 10 days prior to your workshop, please call 732-788-1257 to confirm that your registration has been received and that the workshop is going to take place.

Please do not assume that your district is registering for you; they often fail to notify us that teachers are planning to attend. Please register with us and tell us that your district will be sending additional materials; we will then be able to send you a confirmation letter.

[Click here for Registration Form](#)

[Click here to Register Online](#)

Cancellation Policy

A full refund (minus a \$25 processing fee per registration) will be issued to the appropriate party if this office is notified **in writing** at least five (5) business days prior to the workshop date. If you cancel within five (5) business days, or if neither you nor a substitute attend the workshop without notifying us, no refund will be issued.

All workshops are subject to cancellation for insufficient enrollment.

If you register less than one week before the conference, you may not be registered because of over enrollment or because the workshop has been canceled. Please contact our office to verify that your registration has been processed, that you are indeed registered, and that the workshop has not been canceled.

To obtain further information about other programs, call 732-788-1257 or visit the AMTNJ website at <http://www.amtnj.org>