



Engaging Students in Progressions

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Moderator Bio



Mike Houston

**T³ National Instructor
Riverside High School
Ellwood City, PA**

Mike is in his twelfth year of teaching high school mathematics in Ellwood City, PA. While participating in a TI-Navigator™ Fast-Track in 2007, he learned how technology can effectively cultivate students' wide range of learning styles. During this time, Mike has served as a T³ National Instructor and a contributing author for MathForward™.

Panelists' Bios



Michelle Rinehart

T³ Regional Instructor

Fort Davis, TX

Born and raised in rural Ontario, Canada, Michelle studied mathematics, physics, and education before moving to Texas. Michelle has taught high school math and science at rural districts in Texas, while also working as a math and science consultant throughout the state. Her interests include technology integration, conceptual understanding, and curriculum and instruction.



Dan Ilaria

T³ National Instructor

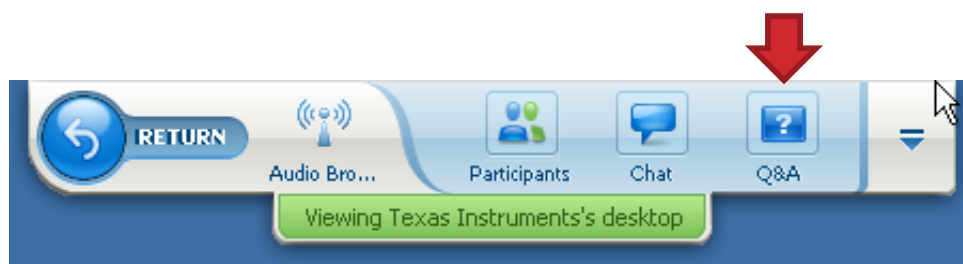
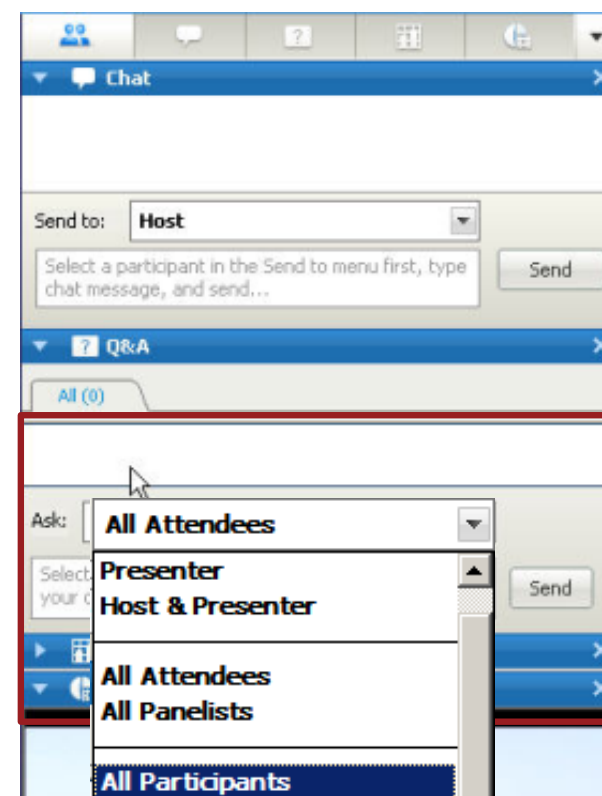
West Chester, PA

Daniel Ilaria is a T³ National Instructor and professor of mathematics education at West Chester University of Pa. Dan has taught middle and high school mathematics as well as been a supervisor of mathematics for several school districts in New Jersey. Currently, he uses TI technology with pre-service and in-service teachers are part of pedagogy classes at both the undergraduate and graduate level.

Chat & Questions?

Please ask questions using the Q&A box:

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*Note: Use the **Chat** panel for general communication*

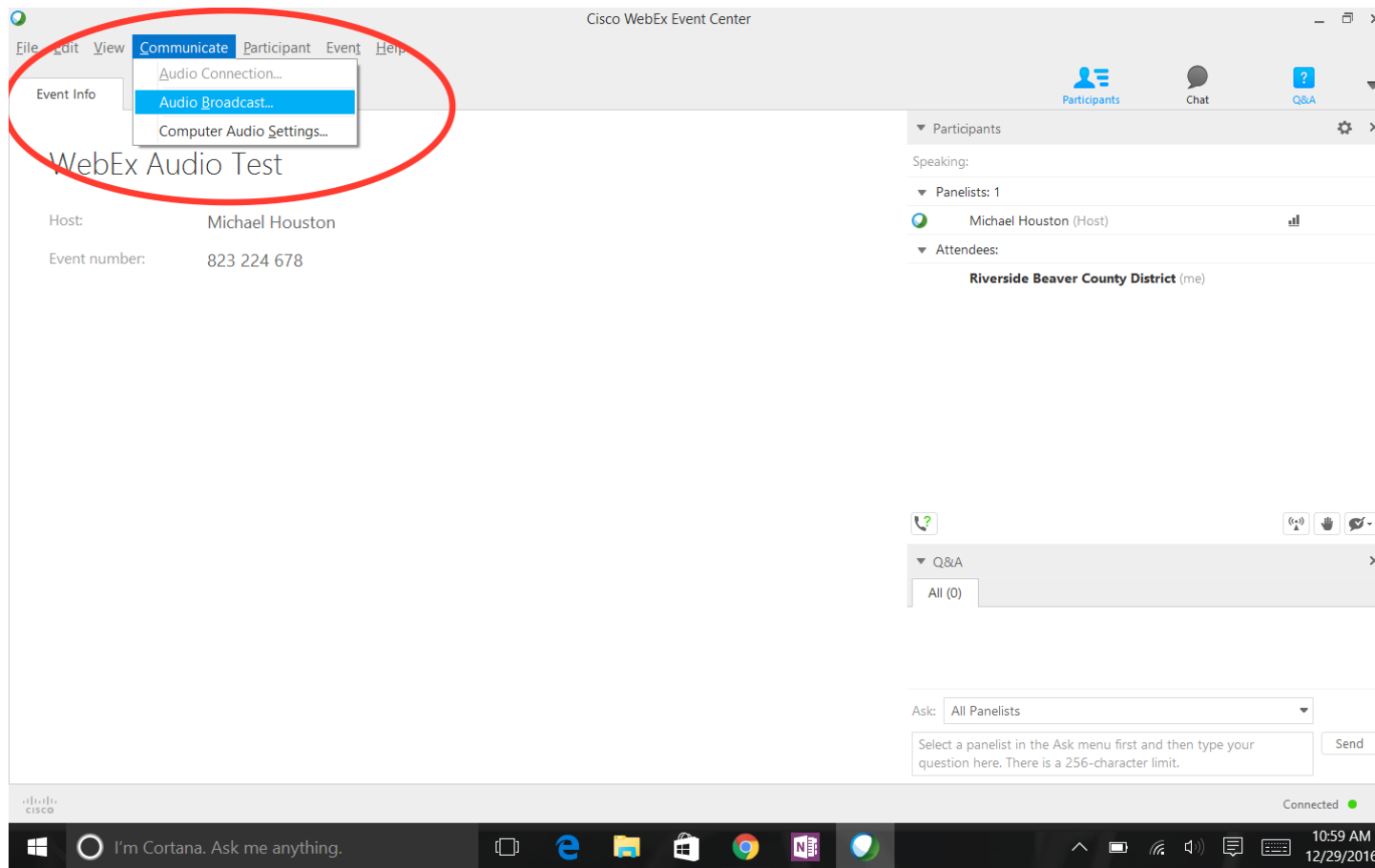
Questions directed to:

- All Attendees** excludes Moderator and Panelists
- All Participants** includes everyone in the meeting

Audio

If your audio becomes disconnected, follow these instructions to reconnect it.

1. In the menu at the top, choose communicate and choose audio broadcast.



Agenda

- Welcome & introductions
- Building Concepts Progressions
 - Background
 - Ratios & Proportional Reasoning
 - Statistics and Probability
 - Equations and Expressions
 - » Key content and pedagogical ideas across grade levels
- Online Resources
- *Webinar Giveaway: complimentary registration for the T³ International Conference*

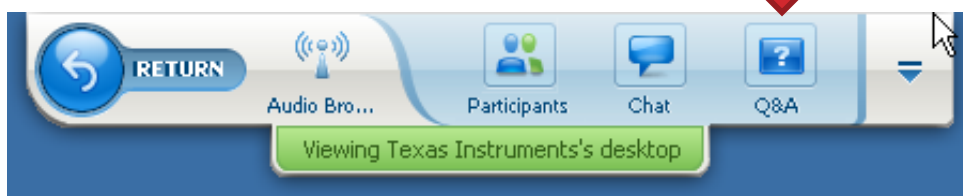
Expected Outcomes:

- **Explore** how the Building Concepts files make the Progressions interactive and dynamic
- **Discuss** how technology supports the learning of content and effective pedagogical practices
- **Provide** resources you can use immediately in your classrooms

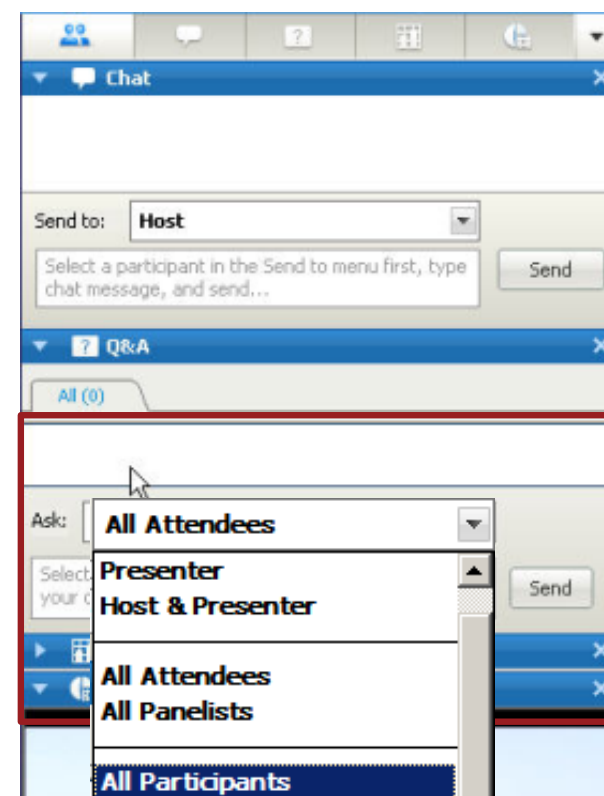
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What is Building Concepts?

■ Building Concepts focused progressions of lessons

■ K-12 conceptual categories

Grade	K	1	2	3	4	5	6	7	8	HS Conceptual Categories
Domains	Counting & Cardinality						Ratios & Proportional Relationships		Functions	Functions
	Operations & Algebraic Thinking						Expression & Equations			Algebra
	Number and Operations in Base Ten						The Number System			Number & Quantity
				Fractions						
	Measurement & Data						Statistics & Probability			Statistics & Probability
	Geometry						Geometry			Geometry Contemporary Mathematics

Data Slide Placeholder

Rima and Eric have earned a total of 135 tokens to buy items at the school store. The ratio of the number of tokens that Rima has to the number of tokens that Eric has is 8 to 7. How many tokens does Rima have? (NAEP, 2013)

a) 8	b) 15	c) 56	d) 72	e) 120
7%	9%	24%	43%	14%

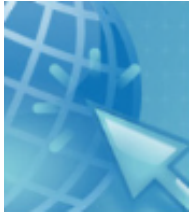
Building Concepts is...

- » Built upon learning progressions to tell a coherent story about mathematical concepts
- » Activities that are interactive and address “tough-to-teach, tough-to-learn” ideas
- » Support for deep learning of content from a conceptual foundation to procedural fluency and implementation of effective teaching practices

How Building Concepts is Different

- » Has students work through misconceptions
- » Emphasis on multiple representations and multiple approaches to solving problems
- » Focus on student interaction with mathematics to explore and discuss ideas

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exam-accepted getting started
learning to code
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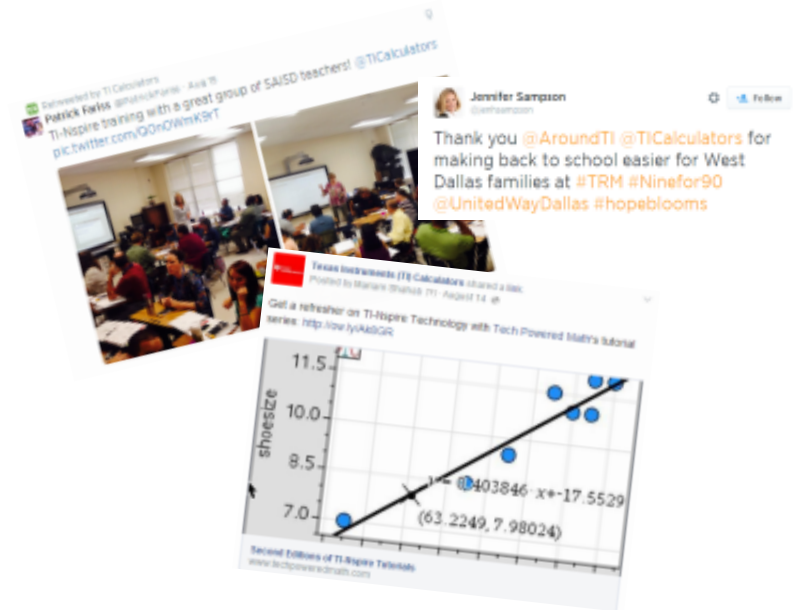
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