00:17:32 Lita Briscoe: Norman OK
00:17:46 Kirsten Bohl: Durham, North Carolina
00:17:51 Dave Ebert: Dave from Wisconsin :-)
00:17:51 Sunil Singh: Hello, Everyone!
00:17:52 Carin DeClute: King George, VA
00:17:52 Kevin Dykema: Welcome from southwest Michigan- so excited to learn tonight!
00:17:58 Toni Galassini: Hi from Chicago!
00:17:59 Trena Wilkerson: Hello from Waco, TX!
00:17:59 Maria Reiss: Lynn, MA
00:18:05 Ann Hall: Charleston, WV
00:18:05 Ken Krehbiel: Hello from Washington, D.C.
00:18:09 Charles Wallis: Hello from Brevard, North Carolina.
00:18:10 Stacie Kyhn: Hello from AZ!
00:18:12 Jada Pearson: Hello from Oregon!
00:18:15 Edmond Lau: Hi, this is Edmond from Hong Kong
00:18:15 Richard Pieper: Idaho
00:18:17 Latrenda Knighten: Greetings from Baton Rouge, LA!
00:18:21 Emily Kavanagh: Hello from Columbia, MD
00:18:30 Christine Royce: Good evening -- Christine from Pennsylvania
00:18:32 Monique Cabellon: Renton, WA
00:18:34 Amy Perrault: Hello from Boston!
00:18:35 Dave Ebert: Hello from Wisconsin!
00:18:36 Charles Wallis: Hello from Brevard, North Carolina.
00:18:38 Richard Pieper: Idaho
00:18:39 Ann Hall: Hello I’m in Charleston, WV. Good evening!
00:18:42 Trena Wilkerson: Hello from Waco, TX!
00:18:47 Kelci Pike: Hi, I'm joining from New Mexico
00:18:50 Tabetha Cochran: Moore, Ok
00:18:51 Ryan Lesh: Hi from Florida
00:18:56 Ryan Ferree: Hello from Virginia
00:18:56 Hope Phillips: Greetings from Columbus, GA
00:18:59 Trena Wilkerson: HI Latrenda!
00:19:00 Marleah Hannaford: Bentonville, Arkansas
00:19:01 Tracy Manousaridis: Hi from Massachusetts!
00:19:03 Margaret Dreier: NY, Hudson River Valley
00:19:04 Sunil Singh: <--Toronto, Ontario
00:19:07 Myah Dewitt: Hello from New York
00:19:19 Angie Stika: from Kansas
00:19:59 Trena Wilkerson: HI Kirsten! So glad you are here!
00:20:08 Kirsten Bohl: :)
00:20:15 Mary Ellen Ryan: Good morning from Hong Kong
00:20:47 Jeny Dohrer: Hello from Minnesota
00:21:09 Kanita DuCloux: Good evening from Kentucky
00:22:01 Toni Galassini: Go Golden Eagles!
00:22:46 Kristina Barnaby: This is Kristina from CT!
00:24:43 Stacie Kyhn: 3,7,12,18
00:24:53 Kristina Barnaby: 3, 7..
00:24:59 Zuzka Blasi: 3,6,10
00:25:01 Maria Reiss: 1, 3, 6, 10

00:25:04 Kanita DuCloux: 3, 6, 10
00:25:05 Ann Hall: 3,6,10,15
00:25:08 Tracy Manousaridis: 3, 6, 10, 15, 21 …
00:25:10 Jessica Forrester: 3, 6
00:25:23 Mary Ellen Ryan: 1, 3, 6, 10
00:25:26 Lita Briscoe: 3, 6, 10, ...
00:25:29 Kristina Barnaby: 3, 6 (not 7), 10…
00:25:30 Jennifer Wall: 1, 3, 6, 10, 15 OR 1, 3, 6, 9
00:25:35 Stacie Kyhn: oops, 3, 6, 10, 15. Added wrong.
00:27:16 Trena Wilkerson: My favorite—wonder, joy and beauty of mathematics!
00:27:55 Kristina Barnaby: @Stacie, I cannot read my own handwriting and counted a dot that was a smudge on my paper
00:28:40 Dave Ebert: find this math timeline at mathigon.org
00:32:52 Kristina Barnaby: Is that Yoko? She does not look happy.
00:40:10 Angie Stika: Will these stories work for middle school?
00:40:28 Sunil Singh: Definitely some of them:)
00:41:01 Kirsten Bohl: The book is aimed at high school (Eddie Woo is a high school teacher). The next book is aimed at middle schoolers!
00:41:28 Angie Stika: So I have to wait? :)
00:41:34 Kristina Barnaby: I like The Number Devil for middle school. Looking forward to hearing more about the Shelley Pearsall book. She’s a favorite of our grade level
00:42:21 Trena Wilkerson: It’s a Numberful world has many things that can be used in middle school as well. Pascal Triangle works very well in middle and high school.
00:42:35 Kirsten Bohl: Mathical / National Math Festival recently hosted a live event with Eddie Woo. The event was accessible to middle schoolers. Replay here: https://www.nationalmathfestival.org/news/online-event-author-educator-and-youtuber-eddie-woo-sept-21-2021
00:42:38 Tracy Manousaridis: We look for patterns in the triangle in 4th and 5th grade
00:42:48 Trena Wilkerson: Excellent @Tracy!
00:42:56 Tracy Manousaridis: ☺
00:43:02 Kristina Barnaby: I’ve done this with set theory and honor’s prealg. You def could use this in 4th and 5th
00:43:41 Ann Hall: Thank you for the link Kirsten!
00:44:18 Angie Stika: Thank you for all of the info. We do study patterns in middle school, so adding another is great!
00:45:50 Kirsten Bohl: Did Pascal learn it from others? Or are each of those separate discoveries?
00:46:15 Maria Reiss: 3rd row diagonal are triangular numbers
00:46:15 Charles Wallis: I notice a column of triangular numbers
00:46:24 Lita Briscoe: Row 7 has multiples of 7
00:46:25 Kristina Barnaby: I see the triangular numbers now!
00:46:31 Peter Sorensen: powers of 11
00:46:42 Maria Reiss: “hockey stick” sums
00:46:46 Kanita DuCloux: Relation to coefficients of (a+b)^n
00:46:47 Kirsten Bohl: The patterns in the triangle are beautiful.

00:46:59 Trena Wilkerson: Rows sum to powers of two
00:47:11 Margaret Dreier: Not counting the ones, first row is even, next is odd, then even, then odds with evens in the middle, then alternating odd and even
00:47:19 Ann Hall: I love the connection to probability within the rows. I use it to teach permutations.
00:47:24 Kanita DuCloux: Triangular numbers on diagonal
00:47:25 Trena Wilkerson: Lots of symmetry
00:47:41 Tracy Manousaridis: Triangular numbers!!!
00:47:52 Peter Sorensen: Sirpinski!
00:48:19 Maria Reiss: YES!
00:48:26 Kristina Barnaby: What is it??
00:48:28 Peter Sorensen: @Maria
00:49:21 Kevin Dykema: I don’t think I’ve ever seen that hockey stick pattern below- amazing!
00:49:49 Dianna Sopala: I never saw the hockey stick pattern before.
00:51:41 Kirsten Bohl: Does this pattern show up in nature?
00:52:15 Peter Sorensen: how would the ancients describe “zoom”?
00:52:58 Jennifer Wall: Get closer/further away?
00:56:22 Kirsten Bohl: In case you want to get your whole middle school reading this book: https://www.onebookoneday.com/
00:57:38 Angie Stika: Thank you Kirsten!
00:57:56 Kirsten Bohl: USA SEF ?
00:58:16 Trena Wilkerson: When NCTM MT turned 100? I think we built one?
01:02:18 Kirsten Bohl: Wow! Very cool.
01:10:32 Dianna Sopala: I never thought about extending it to negative numbers. This is great1
01:11:59 Kirsten Bohl: If you are looking for more Mathical books: https://www.mathicalbooks.org/portfolio/books/
01:13:30 Trena Wilkerson: Many NCTM resources that relate to the topics in both books at https://www.nctm.org/classroomresources/ For example do a search for Pascals Triangle and you will find some fascinating instructional ideas!
01:13:59 Tracy Manousaridis: Wonderful! Thank you
01:14:53 Kirsten Bohl: Wonderful, how do we follow along?
01:14:54 Angie Stika: That would be awesome Sunil!!
01:15:16 Trena Wilkerson: More at : https://www.nctm.org/online-learning/Webinars/Details/533 webinar and handouts included
01:15:28 Sunil Singh: rightanglemath@gmail.com
01:15:42 Sunil Singh: (although I like righttriangle as well;))
01:15:46 Trena Wilkerson: Also check out the MyNCTM Math and Literature Community!
01:15:47 Peter Sorensen: Yes! Thank you!!!
01:16:17 Kirsten Bohl: Thank you very much. This was a lot of fun.
01:16:17 Daniel Irving: Thank you!
01:16:24 Jill Moore: Thank you for your insight and expertise, Dave and Sunil!
01:16:24 Myah Dewitt: Thank you so much!
01:16:27 Kevin Dykema: Thanks for the wonderful ideas and for inspiring us!

01:16:28 Latrenda Knighten: Thank you so much!!!
01:16:29 Trena Wilkerson: Thank you Dave and Sunil!
01:16:29 Edmond Lau: Thank you so much!
01:16:31 Jeny Dohrer: Very informative, thank you so much!
01:16:32 Tabetha Cochran: Thank you!!
01:16:33 Ann Hall: Yes thank you!
01:16:33 Kristina Barnaby: Thank you!!
01:16:37 Kanita DuCloux: Thank you!
01:16:38 Lita Briscoe: Thank you!
01:16:49 Charles Wallis: Thank you very much. Great session!
01:16:51 Dave Ebert: Thanks all!
01:16:55 Angie Stika: Thank you so much for your time!!
01:17:05 Sunil Singh: Thank you, Everyone!:)
01:17:10 Emily Kavanagh: Thanks
01:17:12 Mary Jones: This was awesome....Thank you!
01:17:18 Maria Reiss: Thank you!
01:17:44 Trena Wilkerson: Love Math Lit and Story telling! Powerful way of developing deeper understanding in mathematics.
01:17:46 Latrenda Knighten: Come to New Orleans!
01:17:55 Trena Wilkerson: Cannot wait for New Orleans!
01:18:03 Latrenda Knighten: Yes!!
01:18:07 Trena Wilkerson: https://www.nctm.org/nola2022/
01:18:39 Sunil Singh: I will be there in both New Orleans and Indianapolis:)
01:18:42 Dave Ebert: Dave: dde@oregonsd.org
01:18:44 Sunil Singh: @Mathgarden
01:18:50 Trena Wilkerson: Yeah Sunil! See you there!
01:19:00 Kevin Dykema: Looking forward to seeing many of you in New Orleans and in Indianapolis!
01:19:11 Trina Ford: Thank you!