

00:18:35 Chonda Long:
<https://www.nctm.org/News-and-Calendar/News/NCTM-News-Releases/A-Statement-on-George-Floyd,-Breonna-Taylor,-and-Ahmaud-Arbery/>

00:18:39 Trena Wilkerson: Hello from Waco, TX!
00:18:51 Nyla Moore-McCreary: Hello from Tacoma, WA
00:18:59 Ana Guerrero: Hello from IL
00:19:02 Lorie Huff: Hello from Fayetteville, Arkansas
00:19:03 roya basu: Hi from NJ
00:19:06 Carol Matsumoto: Hi from Winnipeg.
00:19:06 Kristen Donohoe: Hello from Hebron, MD!
00:19:07 Bobbi: hi everyone from Dallas TX
00:19:09 Sara Haas: Charlottesville, VA!
00:19:09 Marquita Morris: Hello all, from Raleigh, NC
00:19:14 Nely Ara-is: hi from Norfolk, VA
00:19:15 Eric Stauth: Hello from hot Las Vegas
00:19:17 KRISTIN JOHNSTON: Hello from Wichita Falls, TX
00:19:19 Michael Lanstrum: Hello from Cleveland, OH
00:19:19 Jolene Peterson: Hello from Kansas!
00:19:21 Catherine Bronikowski: Hello from Milwaukee, WI
00:19:22 Cindy Luper: Hi from Arkansas
00:19:24 C Robertson: Hello from Nevada
00:19:25 Anne Marie Hohman: Hi from Alexandria, VA!
00:19:26 Lynda Krivansky: hello from Oxford PA!
00:19:29 Gayle Arbaugh: Hi from Puyallup WA
00:19:31 Ebony Baker: Hi from Chesterfield, Va
00:19:32 Edna Rioveros: Hello from the Philippines
00:19:32 Charleta White-Fletcher: Hello From Rocky Mount NC
00:19:33 Dave Elbourne: Trenton ON
00:19:36 Beth Kobett: Welcome everyone!
00:19:36 Thy Dinh: Hi from San Diego
00:19:37 Jaclyn Murray: Hi from Cumming, Georgia
00:19:38 Olga Kosheleva: Hello from El Paso, TX
00:19:38 Ayunda Sri Wahyuningrum: Hello from Indonesia
00:19:40 Julie Vanderlugt: Hello from London Ontario
00:19:40 Lindsay Campbell: Hello from Dartmouth NS
00:19:40 Lynn Meade: Hi from Richmond, Va.
00:19:42 Stephanie Sikes: Hi from Arkansas
00:19:44 Nicolette Nalu: Hello from a math specialist and AMTEA president in BAMA!
00:19:46 Nellie Alvarez: from Goodyear Az
00:19:49 Jessica Gault: Hi Everyone!! From Maryland
00:19:49 LeAnna Deveaux-Miller: Good Evening from NEW PROVIDENCE, THE BAHAMAS
00:19:50 Robert Berry: Hi Robert Berry, Charlottesville, VA
00:19:51 Brandon Daniel: Hello from Durham NC
00:19:54 Jorge Veloso: Hi from Angola.
00:19:54 Tim Bobay: Greetings from Raleigh, NC
00:19:56 Jennifer Russell: Hello from Maine!
00:20:00 Diane Anderson: Hi from Massachusetts

00:20:02 Kay Wohlhuter: Hi from Duluth, MN
00:20:06 Maureen O'Connell: Thank you for this message from Ipswich, MA
00:20:07 Kim Neill: Hello from Arlington TX
00:20:09 Melissa: Hello from Fort Payne, Alabama
00:20:09 Jodi Bland: Hello from Cincy Ohio!!

00:20:10 Janice Holland: Janice Holland here from Suffolk, VA
00:20:11 Aisha Gaisi: Hi from Brooklyn
00:20:17 Noreen Shattuck: Hi from NH.
00:20:17 Julie Dill: Hi from Salisbury, Maryland
00:20:18 Kristin Gray: Hi everyone! Kristin here from DE
00:20:22 Melissa McCann: Hello from Franklin, MA
00:20:23 Skip Fennell: Hi, Skip Fennell, Westminster, MD
00:20:26 Kendra Edwards: Hi from Brooklyn, NY
00:20:27 Lisa Moores: Hello from Brig Bay, Newfoundland, Canada
00:20:27 Faith Peddie: Sending positive vibes from Reston, VA. Enjoy tonight's session everyone. Thank you for being here!
00:20:28 Helene Alalouf: Hi from NYC. Hope all are safe and calm and we find a way to heal our broken nation.
00:20:29 Joanmarie Kulinka: from Joanmarie Kulinka in Virginia Beach, VA
00:20:29 bakn: Hello from Wilmington, NC
00:20:30 Jodi Bland: Hi! Jodi B from Milford Ohio
00:20:32 Daniel Irving: Hello from North Providence, RI!
00:20:33 Chonda Long:
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00:20:46 Anne Carline: hello from st. louis, mo
00:20:53 Meridith Jackson: Meridith from upstate, NY
00:20:54 Arnold John Bulanadi: Hello Arnold from Jacksonville, Florida USPH
00:20:58 Rowena West: Hello from Madison, Florida
00:21:03 Julie Secrest: Hello from Burleson Texas
00:21:04 Regina Williams: Hi from Miami, Florida
00:21:05 Veronica Kwok: Hello from Queens NYC
00:21:10 Christopher Kenny: Hello from Washington, DC
00:21:11 John Sasko: Good Evening from Mount Vernon NY - just north of the Bronx.
00:21:15 Sara Klein: Hello friends from Waterloo, IA
00:21:16 Ramona Hall: Hello from Charlotte, NC
00:21:17 Heather Steen: Hello from Texas
00:21:27 Chonda Long:
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00:21:28 Adrienne Schlagbaum: Hi, from Teaneck, NJ
00:21:29 Noe Eugenio: Hi from the Philippines.
00:21:40 Tracy Wood: Hello from Clermont, Florida K-5 Math Program Specialist, Lake County Schools
00:21:47 Traci Emory: Good Evening from Maine
00:21:50 Tani Molina: Hello from Hinesville, GA

00:21:52 Lori McDevitt: Hello from NC
00:21:52 Alison Walker: Hello Alison Walker Darien, Georgia
00:21:57 Joan Albers: Hello from Ohio
00:21:58 Lorie Huff: Thank you Trena and Robert for making this
statement.
00:21:59 Terri Davis: Hi from Richmond VA
00:22:01 Leslie Sorace: HI from AZ

00:22:07 Stacy Milas: Hello from New York
00:22:19 Stephenia Courtney: Hello from Las Vegas, NV
00:22:23 Margie Acabal: Hi from Philippines
00:22:25 Erica Wagner: Hi from PA
00:22:27 Janet Jimenez: Greetings from NYC
00:22:34 Sharon Black-MacKinnon: Good evening from New Brunswick Canada
00:22:42 Delores Rushing: Delores Rushing, Washington, DC Hello to
everyone.
00:22:54 Mary-Ellen Moore: Hello from Ontario Canada
00:22:55 Juaacklyn Cunningham: Hi from KY
00:22:58 Caroline Marshall: Hi, from Cambridge, Maryland
00:23:06 Dewey Gottlieb: THANK YOU for this message Trena and Robert!
00:23:09 Paaru Kwiatkowski: Hello from Southern California
00:23:09 Nyla Moore-McCreary: Thank you for taking the time to acknowledge
the struggle! It requires us to all get involved and to SPEAK UP against hatred and
bigotry in order to make impactful lasting change!!!!
00:23:09 Jet Yeung: Hello Everyone-Jet from Henderson, Nevada
00:23:14 Megan Day: Megan from Maryland
00:23:18 Chonda Long:
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00:23:18 leticia chapa: Hello from San Antonio, Texas
00:23:30 Jan Back: Hello, Jan Back from Hampton, Tennessee
00:23:31 Valerie Vanderport: Thank you for your powerful words.
00:23:31 Maddy: Hi, from Tulsa,
00:23:33 JANICE OLIVERA: Good evening! Watching from
00:23:38 Lesly Brown: Hello! Excited to learn tonight.
00:23:58 Terri Davis: Thank you for this - my heart has been breaking.
00:23:59 Janice Holland: Absolutely. Thank you. Silence implies consent. If
we remain silent in the face of racism, hate, bias, or violence, we are part of the
problem.
00:23:59 Lesly Brown: From Tennessee-Glad to be with you.
00:24:15 Mohamed Jamaludeen Thirapusa Mohaideen: Hi, This is Mohamed from CT.
00:24:27 John Sasko: Thank you Mr. Berry!
00:24:30 Carol Matsumoto: Thank you Trena and Robert for your words
and support.
00:24:33 Gail Dean: Gail Dean from Minnesota
00:24:40 Stephenia Courtney: Thank you!
00:24:40 Jorge Veloso: Great!
00:24:40 Nicolette Nalu: Thank you NCTM!
00:24:43 Julie Vanderlugt: Thank you for sharing that.

00:24:45 Michelle Webb: Hi, Nashville TN
00:24:45 Mohamed Jamaludeen Thirapusa Mohaideen: Great
00:24:51 Meridith Jackson: Thank you!
00:24:52 Chonda Long:
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00:25:00 Mary Dahn: Thank you!
00:25:00 Candace Smith: Candace from Sanford NC
00:25:03 Nora Marasigan: Thank you NCTM.
00:25:03 Sharon Black-MacKinnon: Thank you!
00:25:05 Roberta Yeager: Hi from P
00:25:05 Maggie Pfuntner: Thank you, Robert!
00:25:05 Lorie Huff: Thank you Trena, Robert, and NCTM for making this statement.
00:25:09 Laurie Barker: Hello from Junction, Texas
00:25:10 Gricelda M.: Thank you NTCM!
00:25:15 Fern Johnson: rural Washington State
00:25:15 Jenna Harkness: Hi from Sasktchewan,Canada!
00:25:16 Khaalia Taylor: Hello, from NJ!
00:25:16 Mary Dahn: Mary from Phoenix, AZ
00:25:16 T Greenwood: Thank you NCTM. Tara from Baltimore.
00:25:17 Rochelle Peasley: Hello from Louisa, VA
00:25:18 Erika Hassay: hello from Austin!
00:25:19 Alicia Scott: Hello from San Antonio, Tx
00:25:19 Flora Wright: Salisbury, MD
00:25:20 Natalie Fawthrop Pooler: Halifax NS Canada
00:25:20 Tina Smith: Tina from Lowell, Arkansas
00:25:20 Anne Carline: hello from st. louis, mo
00:25:20 Georgia Molina: Hello from Texas
00:25:21 Katherine McQuain: Thank you, Trena and Robert! From Washington, DC
00:25:21 Caroline Moser: Hello for NC
00:25:21 Callie Herring: Hi from Playas, Ecuador (originally from NC)
00:25:21 Beth Snoop: hello from holland michigan
00:25:22 Victoria Campbell: Hi from Tucson, AZ
00:25:22 Shelbi Cole: Shelbi from Tampa. Thank you, Dr. Berry!
00:25:22 Lori Prantil: Lori Prantil, K-5 math and reading TOSA
00:25:23 Danielle Portocarrero: Melbourne, FL
00:25:23 Nicole Hammell: Hi from Alberta, Canada
00:25:23 Sharon Ling: Hello from NJ!
00:25:23 Christina Lincheck: Hello from Houston, TX
00:25:25 Mari Prior: Hello from Indianapolis
00:25:25 Shannon White: Well put, Trena and Robert. It's unbelievably tragic that we STILL have to make statements such as these.

00:25:25 Clara Modlin: Hello from San Jose CA!
00:25:26 Jennifer Perri: Hi From Rockland County NY
00:25:28 Kelly Massier-Anderson: Hi from Saskatoon, Sk., Canada
00:25:28 Alison Pepero: Hello from Buffalo NY

00:25:29 susan mitzner: Touched my heart thank you from Durham, NC
00:25:29 Jessica Smith: Hello from Miami, Florida
00:25:30 Abdul Razak, Dr: Abdul Razak from Malaysia
00:25:30 Gricelda M.: Thank you NCTM!
00:25:30 Sarah Mertz: Hi from Phoenix, AZ!
00:25:31 Lucinda Smith: Hello from Battle Ground WA
00:25:32 Tamikia Greene: Greetings from Houston, TX
00:25:32 marianne_mammon: Hello from Montauk, NY!
00:25:32 Denise Sears: Denise from Stoneville, NC
00:25:33 Jacqui Vansoest: Hello & Thank you from Woodland, Washington
00:25:34 Staci Erickson: Hello from Seattle.
00:25:35 Roberta Yeager: Hi from the beautiful Pocono Mountains of PA
00:25:35 Shalini Singhal: Hello from victorville, CA
00:25:37 Angela Daniels: Hello from Milwaukee, Wisconsin
00:25:40 Joan Silvestrini: Hola desde Atlanta, GA
00:25:43 Kim Jones: Kim from Lewisville, TX
00:25:43 Danielle Grenader: Hello from Wheeling, IL
00:25:44 Alberta Jarmon: Hi from Nashville TN
00:25:47 Gricelda M.: Hello from Chicago.
00:25:47 Linda Wojton: Hi Linda from Yardley, PA
00:25:47 HILARY OMOKAFFE: Hi from Muscat in Oman,
00:25:49 Darlene Rowe: Tucson, AZ
00:25:50 Delise Andrews: Delise from Nebraska
00:25:51 Fran Huntoon: Hello from VT!
00:25:53 Danielle Bentley: Hello from Kansas City. Thank you Mr. Berry
and NCTM for your powerful words.
00:25:53 Nicole Young: Hi! From, Haslet TX
00:25:57 Nadia Messadi: Hi from Fayetteville, Arkansas!
00:25:58 Skip Fennell: Thank you Trena, Robert, and NCTM. Empathetic
Leadership!
00:26:13 Dawn Peeples: What a powerful group of educators! Wow!
00:26:14 Eliza Reyes: Hello from San Antonio, TX!
00:26:15 Nicolette Nalu: WOO! Day 35!! NCTM Sessions have been wonderful!!
00:26:16 Jackie Dargon: Hey from Lawrenceville. Ga.
00:26:26 Kenneth Helms: Hello from Arkadelphia, AR Kenneth Helms
00:26:29 Miriam Glock: Hello from Houston, Texas
00:26:36 Leah Watson-Rodgers: A huge thanks to NCTM from Fontana Unified
00:26:48 Rita shamrock: Rita from Senoia, GA
00:26:49 JANICE OLIVERA: Hi! from Saudi Arabia! happy learning!
00:27:16 Sara VanDerWerf: Hello from Sara VDW from Minneapolis -
taking a short break to be with my math family.
00:27:37 Sarah Dickie: Hi Sarah from Prince Edward Island
00:27:59 Mary France Imperial: Hello from Manila, Philippines
00:28:04 Kevin Liner: Go to <http://www.slido.com/>. Event Code: #NCTM2020
00:28:15 Dave Hankin: Hello from Globe, Arizona!
00:28:20 Gail Dean: OK
00:28:39 Kevin Liner: Go to <http://www.slido.com/>. Event Code: #NCTM2020
00:29:16 Flora Wright: nervous
00:29:18 Robin Harbour: overwhelmed
00:29:24 Nora Marasigan: challenging

00:29:25 Traci Emory: anxious
 00:29:35 Gail Dean: wondering
 00:29:36 Robin Harbour: overwhelmed.
 00:29:40 Kevin Liner: Go to <http://www.slido.com/>. Event Code: #NCTM2020
 00:29:53 Thy Dinh: I'm excited but I kno kids are anxious
 00:29:53 Alison Pepero: nervous
 00:29:55 Stephanie Barber-Wehrman: overwhelmed
 00:30:05 Beth Kobett: Hi @Thy!
 00:30:18 Thy Dinh: Hi Beth!
 00:30:24 Leah Watson-Rodgers: Teaching it in a conceptual way is so much
 harder than procedural
 00:30:29 Edna Rioveros: fearful and confusing
 00:30:36 Nora Marasigan: confusing
 00:30:37 Beth Kobett: So fun to see you on the webinar Thy!
 00:30:53 Mary France Imperial: hard
 00:30:59 John Sasko: Fractions - Fuhgetbaoutit!
 00:31:03 Susan Troutman: Wow!
 00:31:07 Thy Dinh: NCTM webinars have been awesome
 00:31:18 John Sasko: Fractions - not a fourt letter word
 00:31:31 Cindy Bryant: Please change your chat setting to All panelists and
 attendees
 00:31:44 Leah Watson-Rodgers: Many teachers and students think it is a 4
 letter word.
 00:33:11 Catherine Bronikowski: life is messy - not everything happens as
 integers - once learned fractions MUST show up in ongoing curriculum
 00:33:31 Terri Davis: Can we get these slides?
 00:34:34 fran V.: number
 00:34:35 Alicia Sotello: parts of a whole
 00:34:38 Robin Harbour: parts of a whole
 00:34:41 Megan Day: a part of the whole
 00:34:42 Michelle Webb: parts of a whole
 00:34:42 Mohamed Jamaludeen Thirapusa Mohaideen: Not whole
 00:34:43 Shalini Singhal: part of whole
 00:34:44 Edna Rioveros: parts of a wholw or a set
 00:34:45 Amy Garwell: part of a whole
 00:34:46 Mary Dahn: part of a whole
 00:34:48 Kia Barrieau: Equal sized parts of a whole
 00:34:50 HILARY OMOKAFFE: Share of chocolates.
 00:34:50 Lori McDevitt: a number that is less than a whole
 00:34:50 Ute Moore: A part of a whole
 00:34:51 Georgia Molina: part of a whole
 00:34:52 Leah Watson-Rodgers: part of a whole or part of a set
 00:34:52 Delores Rushing: parts of a whole
 00:34:53 Jennifer Russell: part in relation to a whole
 00:34:53 Valerie Vanderport: part of a whole
 00:34:53 Jodi Bland: Numerator and demonitor
 00:34:53 Roberta Yeager: part of a whole
 00:34:53 Mary France Imperial: its part of a whole
 00:34:54 Khaalia Taylor: part of a whole
 00:34:54 Nora Marasigan: Fraction is a part of a whole.

00:34:54 Jolene Peterson: part of a whole
 00:34:54 T Greenwood: fractions are numbers
 00:34:56 Diana Rixom: Part of a whole
 00:34:57 Brandon Daniel: a division problem or a ratio
 00:34:58 Staci Erickson: a piece or a part of a whole
 00:34:58 Roberta Yeager: less than 1
 00:34:58 Tani Molina: parts of a whole
 00:34:59 Enkelejda Limani: a division
 00:35:00 Erika Manges: part of a whole
 00:35:01 Joan Albers: part of a whole
 00:35:02 fran V.: number
 00:35:02 Julie Vanderlugt: part of a whole
 00:35:03 JENIEVE DeBonis: part of a whole
 00:35:03 Mark Vasicek: A ratio of two numbers
 00:35:04 Shalini Singhal: part of a set
 00:35:04 Stephenia Courtney: part of something larger
 00:35:04 Sarah Chu: part of a whole with equally partitioned size
 00:35:04 Rachel Anderson: equal parts of a whole
 00:35:05 Traci Emory: part of a whole
 00:35:07 Shannon White: A quantity - part of a whole
 00:35:07 LARITA MITCHELL: Divided, equal parts of a whole
 00:35:08 Ayunda Sri Wahyuningrum: part of a whole
 00:35:08 Edna Rioveros: fraction means equality
 00:35:09 Mary-Ellen Moore: equal parts of a whole
 00:35:09 Danielle Portocarrero: piece of a whole
 00:35:10 Branch Pronk: an equal part of a whole
 00:35:10 Sharon Black-MacKinnon: Equal parts of a whole
 00:35:10 Mary Hamilton: equal parts of a whole
 00:35:11 Dewey Gottlieb: a number
 00:35:11 bakn: less than one
 00:35:11 Lauren Gainsbrook: Relationship between numbers
 00:35:12 Cara Littlefield: a ratio comparing part to whole
 00:35:12 Sabrina Meyer: equal parts of a whole or group
 00:35:13 Dave Hankin: piece of a whole
 00:35:13 Judith Harris: A partial number
 00:35:14 lynnc: a part or piece of something
 00:35:14 Nadia Messadi: a quantity
 00:35:15 leticia chapa: Equal parts of a whole
 00:35:15 Tina Smith: Cutting a whole into equal parts
 00:35:16 Mark Vasicek: Or a comparison of two numbers
 00:35:17 Melissa McCann: part of a whole
 00:35:17 Angela Hines: visual representation of part to whole
 00:35:17 Sherry Maxx: parts of a whole
 00:35:18 Jan Bjelopetrovich: equal part of a whole
 00:35:18 Ana Guerrero: Part of a whole
 00:35:18 Rita shamrock: from Rita part of a whole
 00:35:19 Ute Moore: a number that represents a smaller part then a whole
 00:35:19 Fran Huntoon: A fraction is a number with several constructs; part
 whole, quotient, measurement, operator, part part
 00:35:20 Enkelejda Limani: division

00:35:22 Stephenia Courtney: equal pieces

00:35:22 Katrina Baskfield: equal parts of a whole

00:35:22 Caitlin Harrigan: A part of a whole

00:35:23 Thy Dinh: fractions are about relationships

00:35:24 John Sasko: A number that describes the relationship between a part and a whole

00:35:25 Roberta Yeager: whole and less than 1

00:35:25 Martisha Dunn: part of a whole number

00:35:26 Lisa Lambuth: a number less than 1

00:35:26 Darlene Rowe: A name for a number that has parts to it

00:35:26 Anne Carline: it is a group of a whole

00:35:27 Khaalia Taylor: A unit

00:35:27 Christina Lincheck: A whole decomposed into equal parts

00:35:28 Mark Vasicek: Fractions could be more than a whole!

00:35:28 Danielle Grenader: one integer divided by another

00:35:28 Mark Phipps: How much you have compared to an amount

00:35:30 Melissa McCann: a number in-between two whole numbers

00:35:31 Sarah Dickie: ratio

00:35:33 Mary France Imperial: ratio, division

00:35:34 Adrienne Schlagbaum: part of a whole, though it might represent the amount between two wholes

00:35:35 Shalini Singhal: equal parts

00:35:35 Ana Guerrero: a division

00:35:38 Shannon White: QUANTITY/AMOUNT (Part of whole)

00:35:39 Joan Albers: numerator and denominator

00:35:41 Dian Kurniawan: a number with cannot divide by zero number

00:35:42 Janet Jimenez: Equivalent parts of a whole..

00:35:43 Alison Pepero: a part of a whole

00:35:45 Delores Rushing: Delores Rushing Parts of a whole, set

00:35:45 Denise Walston: part of a whole that has been divided into congruent parts

00:35:45 Margie Acabal: ratio

00:35:45 Kevin Liner: Desmos Link:
<https://student.desmos.com/activitybuilder/student-greeting/5ed554557422c811a0eb9a26>

00:35:46 Fran Huntoon: A fraction is multiplicative relationship

00:35:49 Mark Vasicek: A fraction could be a whole number, too!

00:35:50 Kimberly Turner: equal parts

00:35:59 Ayunda Sri Wahyuningrum: part of a whole with multiplicative relationship

00:36:04 Kevin Liner: Desmos Link:
<https://student.desmos.com/activitybuilder/student-greeting/5ed554557422c811a0eb9a26>

00:36:07 Anastasia Alexiou: part of a whole

00:36:14 Kevin Liner: Desmos Link:
<https://student.desmos.com/activitybuilder/student-greeting/5ed554557422c811a0eb9a26>

00:36:15 Catherine Bronikowski: decomposition and composition

00:36:56 Edna Rioveros: 5 wholes

00:37:03 Mary Hamilton: Can you show the graphic again? It doesn't show all of it on desmos

00:37:28 Kevin Liner: Desmos Link:
<https://student.desmos.com/activitybuilder/student-greeting/5ed554557422c811a0eb9a26>

00:37:40 Dave Hankin: How many do I see of what?? Pieces, wholes....

00:37:50 Dave Hankin: I guess that's the idea.

00:37:54 Mohamed Jamaludeen Thirapusa Mohaideen: No option to enter the code.
sorry

00:37:57 Nadia Messadi: 5 wholes

00:38:05 Julie Secrest: 5 I see a group of 4 + 1

00:38:09 Michelle Green: I like this

00:38:10 Roberta Yeager: 5

00:38:23 Delores Rushing: 5 wholes divided into various parts

00:38:27 Michelle Webb: 5 Hexagons

00:38:30 Gail Dean: 5

00:38:30 Shannon White: I see 2 and 1/2 (My whole is 2 hexagons together to
make 1 whole)

00:38:37 HILARY OMOKAFFE: 5 hexagons

00:38:54 bakn: $30/6$

00:38:56 Cindy Bryant: Illustrative Mathematics - IM

00:38:56 Sandra Pech: 5 wholes

00:38:58 Jet Yeung: 10

00:39:01 Tani Molina: 10

00:39:04 Ute Moore: 5 whole= 5 half, 2 whole, 3 thirds

00:39:09 Regina Williams: 14

00:39:09 Khaalia Taylor: $2 + 5/2 + 3/6$

00:39:12 Dewey Gottlieb: counting units

00:39:12 Roberta Yeager: matching

00:39:13 Amy Johnson: I have done this with my students and we simply call
it "How many?" It is great way for them to start thinking about using units!

00:39:17 Marie Hannon: 5 wholes, wholes and halves, whole, halves, thirds
and half, hexagons

00:39:23 Susan Bardenhagen: Are we supposed to be thinking and answering
like a first grader? If so, I need to change my answers!

00:39:27 Kia Barrieau: parts and wholes, shapes

00:39:28 Georgia Molina: 5 wholes, 5 half, 3 thirds

00:39:35 Sara Haas: class code please

00:39:36 Robin Schwartz: hexagons are composed of other shapes

00:39:38 Fran Huntoon: Unitizing

00:39:41 Tracey Gillies: It gets at unit thinking.

00:39:41 Roberta Yeager: parts that make a whole

00:39:43 Gail Dean: number of shapes, number of specific colors of
shapes, how

00:39:44 Terri Davis: parts of whole

00:39:45 Ute Moore: parts of a whole

00:39:45 Janet Jimenez: 4 whole pieces/ 2 wholes divided into 2 halves/ 1
whole divided as $1/2$ and thirds. $1/2 + 1/3 + 1/3 + 1/3$

00:39:46 Kia Barrieau: partitioning

00:39:47 marianne_mammon: Identifying the whole

00:39:48 Sandra Pech: equivalency

00:39:49 Ramona Hall: equivelancy

00:39:49 Mark Vasicek: halves

00:39:49 Yvonne Arden: parts and whole

00:39:51 HILARY OMOKAFFE: understanding students Vocab in mathematics.

00:39:52 Sandra Ubben: shapes

00:39:52 Bobbi: decomposing objects

00:39:52 Brandon Daniel: decomposing wholes; equivalent fractions

00:39:53 Alicia Sotello: ways to make a whole

00:39:53 Adrienne Shlagbaum: equivalent parts or congruent shapes

00:39:53 susan mitzner: please put in link unable to get in

00:39:54 Kia Barrieau: unitizing

00:39:55 Rowena West: Shapes, parts, and colors

00:39:55 Edna Rioveros: fractions

00:39:57 Stacy Sammons: Defining a whole

00:39:58 Jolene Peterson: begin to think about different ways to represent numbers that are equivalent

00:39:58 Shalini Singhal: distribution of color

00:39:59 Janet Jimenez: Equal parts

00:39:59 Lori McDevitt: which color block is half of the yellow hexagon?

00:40:00 Gail Dean: how many whole objects do you see? How many parts?

00:40:00 Adrienne Shlagbaum: congruent shapes

00:40:00 Meridith Jackson: partitioning

00:40:00 Shannon White: Unitizing is KEY

00:40:01 Beth Snoop: they are not all the same

00:40:01 Amy Johnson: Connections between whole numbers and fractional parts

00:40:01 Tracey Gillies: More than one way to name a quantity.

00:40:02 Nicole Young: some will just name colors that they see

00:40:02 John Sasko: What am I counting? What's the unit?

00:40:02 Anne Carline: talking about different ways to represent one. or different ways to represent halves etc.

00:40:02 Skip Fennell: How parts contribute to a whole

00:40:03 Kelly: fair sharing

00:40:03 Mary Dahn: partitioning, fractions

00:40:04 Sandra Ubben: decomposing and composing shapes

00:40:04 Sharon Black-MacKinnon: partitioning

00:40:05 Megan Day: they could draw their thoughts

00:40:06 Kathryn Villarreal: They would discuss that some pieces are divided and some are not. What does that mean to them?

00:40:06 Nadia Messadi: they might count every part

00:40:06 Branch Pronk: how to name the parts

00:40:07 JENIEVE DeBonis: equivalency

00:40:07 Gayle Arbaugh: part whole relationships, division, relationship between multiplication and division, fractions, relationship between fractions and division

00:40:07 LARITA MITCHELL: How many halves? How many in all?

00:40:07 Darlene Rowe: Makes me think of number talks, explain your answer and it's valid

00:40:08 Nicole Young: geometric vocabulary

00:40:09 Khaalia Taylor: Sorting, partitioning, equivalence

00:40:09 Michelle Green: Shapes, Subitizing, parts and wholes, make up of shapes

00:40:09 Caitlin Harrigan: fractions

00:40:09 Ute Moore: same but different

00:40:09 Leyla Plunkett: A whole is made up of part- decomposing
 00:40:10 Mark Vasicek: relation to color.
 00:40:10 Regina Williams: parts, whole, equal parts, units
 00:40:10 Darlene Bailey: Different sizes of parts
 00:40:10 Erika Hassay: equivalence
 00:40:11 Shalini Singhal: shapes
 00:40:11 Melissa McCann: part-whole relationships
 00:40:12 Victoria Campbell: various shapes
 00:40:12 Teresa Hammett: Idea that there can be more than one answer.
 00:40:12 Ayunda Sri Wahyuningrum: equal part
 00:40:13 Dewey Gottlieb: identifying the units you are counting (define the
 "whole")
 00:40:13 Sarah Mertz: Identifying parts in a whole
 00:40:14 Georgia Molina: shapes, colors,
 00:40:15 Mark Vasicek: use blocks...
 00:40:16 Rachel Anderson: decomposing and composing, naming parts and
 wholes differently based on equivalent fractions
 00:40:16 Alicia Scott: pieces
 00:40:17 Paaru Kwiatkowski: shapes, colors, partition,
 00:40:18 John Sasko: ARE the parts the same size?
 00:40:19 Nicole Young: parts and wholes
 00:40:19 Georgia Molina: equal parts
 00:40:20 Adrienne Shlagbaum: number of sides with different shapes
 00:40:20 Traci Emory: fractions
 00:40:20 Amy Garwell: how to divide into different fraction amounts and
 equivalent fractions
 00:40:20 Kim Jones: shapes, fractions, parts, wholes, equivalence,
 composing decomposing
 00:40:20 Maureen O'Connell: What is the whole? Wholes can be divided
 into equal parts
 00:40:21 Tina Smith: terminology
 00:40:21 Leyla Plunkett: different ways to compose the same whole
 00:40:22 Regina Williams: sorting by colors. shapes
 00:40:23 Susan Bardenhagen: shapes, colors, knowledge of pattern blocks
 from a center
 00:40:23 Edna Rioveros: parts
 00:40:24 Alison Pepero: equal parts
 00:40:25 Thy Dinh: composing and decomposing, shapes, colors
 00:40:25 Sharon Black-MacKinnon: equal parts of a whole
 00:40:25 Denise Walston: looking at the whole; units; describing part of the
 whole
 00:40:26 Mary France Imperial: shapes
 00:40:29 Lisa Allen: fractions
 00:40:29 Georgia Molina: equivalent
 00:40:29 Sarah Chu: equal parts
 00:40:31 Cesely Thompson: What can be parts when different shapes are
 the wholes
 00:40:31 Dave Hankin: classifying
 00:40:32 Valerie Vanderport: shapes that compose the whole
 00:40:33 Jodi Bland: K: Colors, shapes, count how many parts

00:40:34 ANALINE BAUTISTA: decomposing
 00:40:34 Sharon Black-MacKinnon: shapes
 00:40:35 Karin Leonard: fractions
 00:40:35 Danielle Portocarrero: we would definitely see the different ways
 students think, and be able to talk about equal parts
 00:40:36 MARIA THERESA R. ABUNDA: good day from doha qatar
 00:40:36 Martisha Dunn: colors and whole shapes
 00:40:36 Rita shamrock: look alike are different
 00:40:37 Thy Dinh: labels are important
 00:40:39 Terri Davis: There's more than one right answer sometimes!
 00:40:39 Candice Markel: How shapes are made up of different pieces or shapes
 00:40:40 Alessandra Kennedy: multiple representations

00:40:40 Catherine Bronikowski: patterns
 00:40:40 Sherry Maxx: equivalentents
 00:40:40 Marie Hannon: equivalent, fractions, whole, decomposing, composing
 00:40:42 Alicia Scott: Equal sized pieces
 00:40:44 Julie Vanderlugt: equivalent fractions, improper fractions,
 whole numbers, parts , shape, colour
 00:40:49 Sherry Maxx: patterns
 00:40:50 Georgia Molina: decomposing, composing
 00:40:58 Delores Rushing: Delores Rushing Showing how you can start
 with a whole and then show how that whole can be divide into variuous prts
 00:41:00 Julie Vanderlugt: compose and decomposing.
 00:41:01 Patti Gawronski: relationships and equivalent shapes
 00:41:07 susan mitzner: same shapes different number of pieces
 00:41:13 Ute Moore: A
 00:41:18 Lisa Allen: a
 00:41:19 Cindy Bryant: Please change your chat setting to All panelists and
 attendees

00:41:20 Georgia Molina: A
 00:41:20 Ana Guerrero: c
 00:41:20 Mohamed Jamaludeen Thirapusa Mohaideen: a
 00:41:21 Roberta Yeager: A
 00:41:21 James Hensley: A
 00:41:22 Traci Emory: c
 00:41:22 Sarah Chu: a
 00:41:25 Sherry Maxx: c
 00:41:26 Gricelda M.: D, its a cricle
 00:41:27 Cara Littlefield: A is not partitioned equally
 00:41:27 Sandra Pech: a not equal parts
 00:41:28 Megan Day: A because they are uneven.
 00:41:28 Branch Pronk: A not equal parts
 00:41:29 Pam Cadena: A- not split equally
 00:41:29 Terri Davis: A, the pieces are not equal
 00:41:29 Tracey Gillies: A because it does not have equal parts.
 00:41:30 bakn: A not equal parts
 00:41:30 Sarah Chu: not equal parts
 00:41:30 Sara Haas: A not equal parts
 00:41:30 Alison McDaniel: D because the other ones are squares

00:41:30 Jan Bjelopetrovich: D because its a circle

00:41:31 Amy Garwell: A- not equal size pieces

00:41:31 Leah Watson-Rodgers: A because it's not divided equally

00:41:32 Ute Moore: not the same parts

00:41:32 Leyla Plunkett: D- it's not a rectangular whole

00:41:32 Joan Albers: A not fractional parts

00:41:32 Valerie Vanderport: D-not a quadrilateral

00:41:32 Nicole Hammell: a-- as the parts are not equal

00:41:33 Nadia Messadi: D a circle

00:41:33 Bobbi: A not portioned equally

00:41:33 LARITA MITCHELL: A

00:41:33 Sandra Ubben: C because the whole is shaded

00:41:33 Melissa: D-It is the only shape that doesn't have straight sides

00:41:33 Roberta Yeager: not equal parts

00:41:33 Staci Erickson: A doesn't have equal parts

00:41:33 Cesely Thompson: A doesn't belong because they are not equal parts

00:41:34 Stephanie Sikes: A, not equal parts

00:41:34 James Hensley: A does not have equal parts

00:41:34 Denise Sears: A because the parts are not equally partitioned

00:41:34 Alison Pepero: A

00:41:35 Beth Snoop: B only has 2 divisions, not 4

00:41:35 Erika Manges: A not all parts are equivalent

00:41:35 Clara Modlin: B-divided in 2 parts not 4

00:41:35 Erin Meunier: C - all pieces are there

00:41:35 Darlene Bailey: D: because it is the only circle

00:41:36 Stacy Sammons: C because the whole shape is shaded

00:41:36 Georgia Molina: A different sizez

00:41:36 Janet Jimenez: A-it is not divided into equal parts

00:41:36 JENIEVE DeBonis: A because its not a fraction

00:41:36 Carolyn Davis: A does not belong because the parts are not equal

00:41:37 Shalini Singhal: c, because the whole is shaded

00:41:37 Meredith Jackson: A: not split into equal parts

00:41:37 Maureen O'Connell: A doesn't belong because it does not have equal parts

00:41:37 Regina Williams: A not cut into equal parts

00:41:37 Nicole Bayler: A does not have equal parts

00:41:37 Sara Klein: B not partitioned into 4 pieces

00:41:38 Anne Carline: A because it's the only one not divided into equal shapes

00:41:38 Linda Rodriguez: c - it's all shaded in

00:41:38 Tracy Wood: A- does not have equal parts

00:41:38 Ana Guerrero: C because the whole figure is shaded

00:41:39 Lisa Allen: A because it is not equal parts

00:41:39 Michelle Webb: d it's not a parallelogram

00:41:40 Sarah Mertz: A doesn't belong because it does not have equal parts.

00:41:40 Adrienne Shlagbaum: B because it is the only one split into two parts (or not 4 parts)

00:41:40 Mohamed Jamaludeen Thirapusa Mohaideen: No proper fraction in A

00:41:40 Rowena West: D because the outside is not a straight line

00:41:40 Mary Dahn: a because the pieces are not equal

00:41:41 Kia Barrieau: C, one whole

00:41:41 Lisa Lambuth: C because all the pieces are shaded

00:41:41 Sara Lane: A because it doesn't have equal parts.

00:41:41 Denise Walston: A; not equal parts

00:41:42 marianne_mammon: b because it shows 2 parts, not 4

00:41:42 Caitlin Harrigan: A

00:41:42 Lauren Gainsbrook: A because it is the smallest part of its whole.

00:41:42 Sharon Black-MacKinnon: A because the parts are not drawn equally

00:41:42 Jolene Peterson: C because one whole is shaded

00:41:42 Johanna Bautista: a doesn't have equal parts

00:41:42 Michele Smith: c - it is all shaded in

00:41:43 Brandon Daniel: c. Its a whole

00:41:43 Nicole Young: a doesn't belong because there are not 4 equal parts represented

00:41:43 irma maceachern: all four don't belong together...but all have something in common

00:41:43 Laurie Barker: D - not a quadrilateral

00:41:43 Fran Huntoon: D because it is a circle

00:41:44 ANGELICA DELA VICTORIA: A. because it is not equally divided

00:41:44 Megan Day: B because it is only divided in to two parts instead of 4 parts

00:41:44 Alicia Scott: A - not equal

00:41:45 Sarah Chu: not partitioned evenly

00:41:45 Tani Molina: b , it is not in four parts like the others

00:41:45 Sarah Dickie: D - it is the only one that shows a quaterd of a circle

00:41:45 Diana Erchick: A bc it's the only one that doesn't have equal parts

00:41:46 Jan Bjelopetrovich: C because all the pieces are gray

00:41:46 Angela Daniels: A All of the parts are not equal

00:41:46 Khaalia Taylor: D because it's not rectangular

00:41:47 Adrienne Schlagbaum: C all shaded

00:41:47 Deanna Rigdon: d it is round

00:41:48 Marissa Day: B doesn't have quarters

00:41:48 Fern Johnson: D - not a rectangle; C - not a part of a whole

00:41:48 Cindy Luper: C - It represents a whole where the others do not.

00:41:48 Gail Dean: C it has more than on e part shaded

00:41:48 Beth Snoop: D is a circle

00:41:48 Alicia Sotello: A doesn't belong because it is not partitioned into equal parts

00:41:48 John Sasko: C - it is only one showing a whole 4/4

00:41:48 Eric Stauth: a. there are four parts but not all of them are the same size

00:41:48 Lisa Pybus: A because it is not divided iot equal parts

00:41:49 Georgia Molina: D its a circle

00:41:49 Lisa Rogers: C is the only one completely shaded.

00:41:49 Sherry Maxx: C because it's a whole

00:41:50 Victoria Campbell: A - not equal parts

00:41:50 Martisha Dunn: Circle

00:41:50 Lindsay Campbell: a- not equal parts

00:41:50 Mari Prior: visually it's not equal parts but it could be equal parts

00:41:50 Jenna Harkness: a - doesn't have equal parts

00:41:51 Liz Morris: c more than one part shaded

00:41:51 Alessandra Kennedy: C, it's a whole

00:41:51 Shannon White: C, the whole is shaded

00:41:51 Jennifer Perri: A because it is does not have equal parts.

00:41:51 lynnc: A because it isn't divided into equal parts.

00:41:51 Mary France Imperial: C - it's all shaded

00:41:51 Charleta White-Fletcher: A is not equally divided

00:41:51 Paaru Kwiatkowski: C: All parts are shaded

00:41:51 Kendra Edwards: C- all parts shaded

00:41:52 Meridith Jackson: B: split into 2 pieces, other 4

00:41:52 Stephanie Barber-Wehrman: D because it is round

00:41:53 Kathryn Villarreal: A doesn't belong because it isn't partitioned into equal parts

00:41:53 Danielle Portocarrero: D because all the rest are spilt into square or rectangle shapes

00:41:53 Lynda Krivansky: c because all parts are shaded

00:41:53 Tina Smith: A because not divided equally

00:41:54 Linda Rodriguez: b - only has two parts

00:41:54 Dewey Gottlieb: D because it doesn't have corner

00:41:54 Adrienne Shlagbaum: A only one unequal parts

00:41:54 Nadia Messadi: b 2 parts

00:41:54 Caroline Moser: C has 4 parts shaded in

00:41:54 Tamara Dixon: We call this routine "Eliminate It" in our class!

00:41:54 Lori McDevitt: A doesn't belong, it's the only one that is not divided into equal parts

00:41:54 Mary Jo Dunne: a. not equal

00:41:55 Sharon Stoeckel: not decided into equal parts

00:41:55 Lauren Gainsbrook: C - it is the only whole

00:41:56 Maureen O'Connell: B because it is the only shape divided into halves

00:41:56 Gayle Arbaugh: C because it is one whole or 4/4.

00:41:56 Sarah Dickie: C all is shaded

00:41:57 Teresa Hammett: D is a circle

00:41:57 Nora Marasigan: D

00:41:57 Helene Alalouf: A because not equal partitions; B only one showing halves; C only one having the whole shaded; D 1/4 shaded

00:41:57 KRISTIN JOHNSTON: A because the parts are not even parts

00:41:57 susan mitzner: a not equal parts

00:41:58 Sharon Black-MacKinnon: D because it is a circle

00:41:58 Terri Davis: B, it doesn't have 4 pieces

00:41:58 Yvonne Arden: A the shaded part is not the same size

00:41:58 Cindy Luper: D - It is a circle

00:41:59 Linda Rodriguez: a - unequal parts

00:41:59 Megan Day: D because it is a circle

00:41:59 Tina Smith: B because only 2 parts

00:42:00 Kim Neill: A is not cut into equal pieces or D because it's a circle

00:42:00 Sandra Ubben: D - whole is a circular region

00:42:00 Lisa Lambuth: B b/c it's only cut into two

00:42:01 Michelle Green: D it is the only round shape

00:42:01 Gricelda M.: C, all parts are shaded

00:42:02 Kelly: C doesn't belong because all pieces are shaded.

00:42:02 Patti Gawronski: A parts aren't equivalent

00:42:02 leticia chapa: D because it doesn't have 4 sides

00:42:05 Linda Rodriguez: d circle

00:42:05 Sara Haas: C all shaded rather than a part

00:42:06 Ute Moore: A - not equal parts, D-wrong shape,

00:42:06 Jet Yeung: c

00:42:06 Mark Vasicek: Each doesn't belong for a different reason. C - all quadrants are filled in. D is a circle, not rectangle. B is in 2 parts only. A is divided into different sized parts.

00:42:07 Stephanie Barber-Wehrman: c because the others are 1/4

00:42:07 Tina Smith: C because all parts shaded

00:42:07 Robin Harbour: Each doesn't belong for a different reason: A doesn't because it's unequal parts, B doesn't because it's broken into 2 parts, C doesn't belong because it's all shaded. D doesn't belong because it's a circle

00:42:07 Beth Snoop: C has everything shaded

00:42:07 Terri Davis: C, all the parts are shaded

00:42:07 Judy Gerwe: A because not all equal parts

00:42:08 Thy Dinh: the circle doesn't belong since it's not a polygon

00:42:08 Delores Rushing: A it is not divided into equal parts

00:42:10 Edna Rioveros: D bec its a circle ...its part is not equal with the other choices

00:42:10 Margie Acabal: A

00:42:10 Darlene Rowe: A, not all parts; but could be B, only 2 parts; but could be C shows wanting all parts

00:42:11 Daniel Irving: D (is a circle); C (the entire shape is shaded); B (only two regions); A (not divided into equal regions/pieces)

00:42:12 Kristin DeLorenzo: A. They are not equal parts

00:42:13 Paaru Kwiatkowski: A: not equal parts

00:42:15 Dave Hankin: It depends on what we're looking for, but most of us would say D as it is circular while the others are 4 sides.

00:42:15 Maureen O'Connell: D because it is the only circle being divided

00:42:16 ANALINE BAUTISTA: D because it's a different 4ths

00:42:17 Terri Davis: D, the shape is the only circle

00:42:17 Anne Carline: C because it's the only one that is shaded into a whole

00:42:18 Ayunda Sri Wahyuningrum: A because their parts are not equal to the whole

00:42:19 Shalini Singhal: a, unequal parts

00:42:19 Tina Smith: D because it is a circle

00:42:19 Julie Secrest: A because it's not divided into equal parts

00:42:20 Julie Vanderlugt: a because the parts aren't equal in size. B

because is has only two parts. C because all of them are shaded. D because it is a circle shape not a square or rectangle.

00:42:20 Danielle Portocarrero: or A because it's not divided up into equal parts

00:42:21 Mari Prior: c... it's a whole shaded where the others are part shaded

00:42:22 Noe Eugenio: B - not divided by 4

00:42:25 Meaghan McIntyre: d the only one without colored on left side

00:42:25 Diane Anderson: D

00:42:25 Regina Williams: D is a circle

00:42:26 Stephanie Barber-Wehrman: a. not equal parts

00:42:27 Joanmarie Kulinka: Joanmarie Kulinka a not divided into equal parts

00:42:27 HILARY OMOKAFFE: C- whole shape is shaded.

00:42:30 Maureen O'Connell: Such a great invitation for students

00:42:31 Khaalia Taylor: equal parts

00:42:33 Diana Erchick: or C bc the whole is colored in and in each of the others only a part is colored in.

00:42:34 Sara Haas: D not a polygon

00:42:41 Paaru Kwiatkowski: B - only 2 parts unlike the others 4 parts

00:42:43 Nadia Messadi: c all shades

00:42:43 Sharon Black-MacKinnon: C because it is 4 small squares within the whole

00:42:46 Susan Bardenhagen: a because it's not divided evenly/fairly/equally

00:42:46 Dave Hankin: We could say B if looking at total number of pieces.

00:42:49 Margie Acabal: A - divisions are not equal

00:42:50 Judy Gerwe: Hi is this working

00:42:52 Ute Moore: C- shows a whole

00:42:57 Megan Day: equal parts

00:42:58 Regina Williams: B has 2 parts whereas the others has 4 parts

00:42:58 Paaru Kwiatkowski: D not a quadrilateral

00:43:00 Tina Smith: Equal parts

00:43:03 Nicole Young: equal parts

00:43:03 John Sasko: FAIR shares

00:43:04 Lori McDevitt: equal parts

00:43:04 Kendra Edwards: fair sharing

00:43:05 Robin Schwartz: division

00:43:08 bakn: fractions are equal parts of a whole

00:43:09 Brandon Daniel: sharing

00:43:09 Julie Vanderlugt: equal parts

00:43:10 Shalini Singhal: shapes

00:43:10 Mary Dahn: fractional parts are equal groups

00:43:10 Roberta Yeager: equal parts

00:43:11 Bobbi: fractions are equal parts of a whole

00:43:12 Caitlin Harrigan: Shapes, equal parts, symmetry

00:43:12 Nora Marasigan: Equal

00:43:13 Khaalia Taylor: how to classify shapes

00:43:13 Sandra Ubben: equal-sized parts

00:43:13 Mark Vasicek: This builds on shape- rectangle vs. squared.

Coloring / shading.

00:43:14 Danielle Portocarrero: shapes, size,
00:43:14 Traci Emory: equal parts
00:43:15 Sharon Black-MacKinnon: sharing equally
00:43:15 Jan Bjelopetrovich: equal parts
00:43:15 Johanna Bautista: identifying equal parts
00:43:15 Branch Pronk: equal parts of a whole
00:43:16 Mary France Imperial: or maybe D its not a quadrilateral
00:43:16 Maureen O'Connell: fractions have to be equal parts of the
whole
00:43:16 Shalini Singhal: equal parts
00:43:16 Tracey Gillies: Equal parts
00:43:16 Terri Davis: fair share
00:43:17 Tina Smith: Halves, fourths
00:43:17 Nicole Bayler: Conceptions about fractions
00:43:17 Eric Stauth: equal shares
00:43:17 Sherry Maxx: fractions
00:43:17 Alicia Scott: Equal sized parts
00:43:18 marianne_mammon: equal parts, halves and fourths
00:43:18 Rita shamrock: different shapes
00:43:19 Gail Dean: they would know part versus whole, counting
00:43:19 Lorie Huff: identifying shaded parts
00:43:19 susan mitzner: fraction is equal parts
00:43:20 Sara Klein: Sharing
00:43:20 Sara Lane: Equal parts
00:43:20 Lori McDevitt: dividing a shape into equal parts
00:43:20 Anne Carline: building on knowledge of equal parts
00:43:20 Pam Cadena: drawing their models
00:43:21 Danielle Portocarrero: equivalence
00:43:21 Khaalia Taylor: parts vs. wholes
00:43:21 Charlene Martin: shading
00:43:22 Valerie Vanderport: knowledge of polygons
00:43:22 Terri Davis: shape names
00:43:23 Georgia Molina: equal sides
00:43:24 KRISTIN JOHNSTON: Fractions must be equal parts
00:43:24 Laurie Barker: shapes, counting to 4
00:43:24 Michelle Webb: shapes, equal parts
00:43:24 Yvonne Arden: the relationship between a part and the whole
00:43:24 Lori Prantil: D it is a circle
00:43:25 James Hensley: shapes and size
00:43:25 Mary Jo Dunne: equal parts, partitioning
00:43:25 Nadia Messadi: classify
00:43:26 Martisha Dunn: shaded figures
00:43:26 Mark Vasicek: It builds on dividing shapes into parts.
00:43:26 Georgia Molina: shading
00:43:26 Michelle Green: equivalencce
00:43:26 Robin Schwartz: classifying shapes
00:43:26 Rowena West: part to a whole
00:43:26 Ana Guerrero: a whole number vs. fractions
00:43:26 Khaalia Taylor: equal parts

00:43:26 Shalini Singhal: unequal parts

00:43:26 Brandon Daniel: part to whole

00:43:27 Sharon Black-MacKinnon: different shapes

00:43:27 Lisa Pybus: Fractions need to be represented in equal parts

00:43:27 Renee Catalano: fractions work independent of shape

00:43:27 Megan Day: it could build on equal parts, dividing or equal sharing

00:43:27 Jodi Bland: same parts

00:43:28 Thy Dinh: equal parts, sharing

00:43:28 Regina Williams: equal parts,

00:43:28 Georgia Molina: sharing

00:43:29 Judy Gerwe: From: Judy Gerwe

00:43:29 Alicia Scott: describing things in parts

00:43:29 Fran Huntoon: equipartitioning

00:43:29 Erika Manges: Partitioning shapes

00:43:30 Noe Eugenio: student reasoning

00:43:30 Sherry Maxx: different parts of a whole

00:43:31 Shannon White: Fractions can be shaded or Unshaded parts of the whole.

00:43:32 Branch Pronk: naming the whole and the parts

00:43:33 Amy Garwell: equal size for fractional pieces

00:43:34 irma maceachern: my five year old say C because all are covered

00:43:35 Erin Meunier: parts of a whole

00:43:36 Dave Hankin: parts of a greater whole

00:43:37 Kia Barrieau: equal parts, wholes, fair sharing, partitioning

00:43:37 Colleen Feller: equal parts

00:43:38 Carolyn Davis: Fractions must have equal parts of the whole

00:43:40 Megan Day: parts in a whole

00:43:42 Darlene Bailey: Equal parts.

00:43:42 Sandra Ubben: the size of the whole

00:43:43 Alison Pepero: parts of a whole

00:43:45 Regina Williams: discrimination

00:43:45 HILARY OMOKAFFE: Understanding the vocab...differentiation.

00:43:46 Gail Dean: shapes and if shaded shapes are same shape as whole of each

00:43:49 Teresa Hammett: Equal parts vs non equal parts

00:43:52 Yvonne Arden: similarities and differences

00:43:53 Linda Wojton: equal parts

00:43:58 Dawn James: "equivalent" – vocabulary

00:44:00 Sara Klein: Yeah...B looks like two tiles

00:44:02 Kim Neill: equal parts, 2D shape names/properties

00:44:02 HILARY OMOKAFFE: Sequnece and pattern.

00:44:02 Sherry Maxx: student reasoning, patterns, parts of a whole

00:44:04 Fran Huntoon: That you can put shapes to gather to from new shapes

00:44:07 Gayle Arbaugh: equivalence, what is a way to make "a" and "b" equivalent.

00:44:11 Dian Kurniawan: $1/8$, $1/2$. $4/4$, $1/4$

00:44:14 Georgia Molina: pattern

00:44:30 Darlene Bailey: in A they can add squares to see how many equal

squares they can see.

00:44:35 Georgia Molina: equal parts

00:44:40 Robin Schwartz: Grade 1 very advanced language for some s's

00:44:55 Erin Meunier: I agree about the grade 1 lang

00:45:07 Fran Huntoon: Second grade has to see that fractional parts do not have to be the same shape to have the same value

00:45:17 Renee Catalano: You have $\frac{1}{3}$ and examples that are not evenly divided in 2nd.

00:45:30 Robin Schwartz: is expressing the fractioning 2 ways helpful? halves and $\frac{1}{2}$ s

00:45:47 Sherry Maxx: $\frac{1}{2}$, $\frac{1}{4}$, $\frac{4}{4}$, different shades of shapes and parts of whole

00:45:51 Robin Schwartz: also students often think about one fourth in 2020 rather than one quarter

00:46:12 Clara Modlin: Expressing fractions in part/whole form is introduced in 3rd grade, building on 2nd grade knowledge

00:46:41 Fran Huntoon: Fair sharing also contributes to fraction understanding

00:46:53 Thy Dinh: fractions in lower grades is based on visual models only, so concepts of fractions are fundamental

00:47:44 Fran Huntoon: It requires students to do some mental moving of pieces

00:47:46 Robin Schwartz: do s's have manipulatives with this? very cool hexs

00:47:56 HILARY OMOKAFFE: 3 copies of diamond

00:48:22 Jolene Peterson: WOW! I love this!

00:48:26 Sarah Chu: mental movements and number of pieces

00:48:28 HILARY OMOKAFFE: 3 copies of trapezium.

00:48:32 PATRICK GUERRA: Good morning love it

00:48:32 Christine Percy: the foundation to the GR4 standard for mult fractions

00:48:32 Fran Huntoon: I love number of piece and size of piece as fraction language

00:48:33 John Sasko: Iteration - great activity!

00:48:37 Kevin Liner: Go to <http://www.slido.com/>. Event Code: #NCTM2020

00:48:49 Fern Johnson: I teach this in 6th grade and they have manipulatives so I can't imagine the lower grades wouldn't.

00:48:55 Kevin Liner: Go to <http://www.slido.com/>. Event Code: #NCTM2020

00:49:03 Caroline Moser: Why are you using the word copy? That doesn't seem like the best vocab word for that activity

00:49:18 Kevin Liner: Go to <http://www.slido.com/>. Event Code: #NCTM2020

00:49:38 Julie Vanderlugt: can you put the picture back up?

00:49:47 Fern Johnson: I can't see the picture

00:50:13 Melissa: Yes-the pictures are gone before I can gather my answer

00:50:14 Sara Haas: picture please

00:50:17 Nadia Messadi: can't see the pictures

00:50:22 Sherry Maxx: Can't see picture

00:50:43 Jessica Yancey: Kids need estimates to build number sense.

00:50:49 Tina Smith: Can't see the picture

00:50:55 Clara Modlin: Image please!

00:51:09 Clara Modlin: Thanks!
00:51:09 Alayna Wearly: thank you
00:51:28 Eric Stauth: iteration
00:51:34 Terri Davis: I like that I can edit my answer!
00:51:43 Danielle Bentley: Shaded!!! Missed that word! LOL!
00:51:52 Gail Dean: 5/6
00:51:58 Maureen O'Connell: love Slido for participation
00:52:11 Mark Vasicek: yes, I did!
00:52:18 Brandon Daniel: using benchmarks
00:52:20 Michelle Green: Iteration
00:52:35 Sharon Black-MacKinnon: benchmarks
00:52:38 Fran Huntoon: Nice link to composition and decomposition of shapes
00:52:42 Georgia Molina: benchmarks
00:52:54 Terri Davis: Cuisenaire rods work well for that too!
00:54:05 Fran Huntoon: The tape diagram and number line connection really helps students "see" the fractions on the number line
00:54:36 Lori McDevitt: layering the tape diagram over the number line really helps students
00:54:41 Kia Barrieau: Helps to see difference between discrete and continuous
00:54:57 Sarah Chu: yes. overlapping them would build on
00:55:20 Thy Dinh: helps kids see relationships between the models
00:55:29 Fran Huntoon: iterating and partitioning are key
00:55:45 Stephenia Courtney: concrete to abstract
00:56:33 Nadia Messadi: not yet
00:56:41 Adrienne Shlagbaum: thinking about copies of repeated parts
00:56:43 Kia Barrieau: Fractions are numbers!
00:56:46 Colleen Feller: using the term "Copies"
00:56:48 Georgia Molina: concrete to abstract
00:56:49 Charleta White-Fletcher: intervals
00:56:50 HILARY OMOKAFFE: Going from concrete to abstract/.
00:56:52 Brandon Daniel: spatial relationships
00:56:52 Valerie Vanderport: less than 1 whole
00:56:57 Ute Moore: one copy of multiple pieces of a whole.
00:56:58 Shannon White: Quantity/Amount
00:56:58 Shalini Singhal: repeating a pattern in a whole
00:56:58 Sandhya Raman: Progression to become whole numbers
00:57:00 Amy Garwell: equal copies of a fractional piece
00:57:00 Alicia Scott: I added equal parts to my definition
00:57:02 Thy Dinh: fractions are relationships
00:57:03 Diane Anderson: Fractions are numbers
00:57:04 Nadia Messadi: the word copies
00:57:05 Anne Carline: fractions can be represented in many different ways from concrete, pictues to number lines.
00:57:05 Khaalia Taylor: intervals between 0 and 1
00:57:06 Mary-Ellen Moore: developing spatial understanding
00:57:13 Jessica Yancey: ordered pair of numbers representing the ratio of parts to whole.
00:57:14 Danielle Portocarrero: a number between zero and 1
00:57:15 Susan Bardenhagen: adding "equal" to parts of a whole

00:57:16 Kia Barrieau: Fractions can be more than one whole

00:57:16 Mary Dahn: part/total

00:57:17 Sarah Chu: fractions are relationships with other contents

00:57:18 Gricelda M.: yes, patterns

00:57:19 John Sasko: A number that is made up of its parts!

00:57:19 Traci Emory: comparisons

00:57:21 Sarah Chu: patterns

00:57:21 Cristy Holtzclaw: add the word equal for equal parts

00:57:22 Darlene Bailey: equal parts

00:57:23 Eddie Pecina: concrete to abstract; spatial awareness

00:57:23 Angela Cooper: parts of a whole

00:57:23 Mary Jo Dunne: concrete --> abstract

00:57:26 HILARY OMOKAFFE: Utilizing visual activity while introducing fraction.

00:57:31 Edna Rioveros: fractions can be represented on a number line

00:57:32 Gayle Arbaugh: pieces less than one that are equal in size can create a or more wholes. part part whole

00:57:34 Marie Hannon: concrete to abstract, numbers, relations

00:57:35 Stephenia Courtney: less than 1 and comparisons

00:57:35 Meredith Jackson: the importance of recognizing fractions as both intervals and points on a number line

00:57:37 Georgia Molina: part of whole, equal sides

00:57:40 Mary-Ellen Moore: magnitude

00:57:42 Mohamed Jamaludeen Thirapusa Mohaideen: $\frac{8}{3}$ is more than 2 whole and $\frac{2}{3}$

00:57:43 Margie Acabal: relationship between parts and a whole

00:57:44 Shannon White: Danielle, fractions can also be more than 1 (ie. improper fractions/mixed numbers)

00:57:44 Alison Pepero: comparison and less than 1

00:57:45 Joan Albers: repeated same size parts

00:57:47 Anne Carline: that fractions of $\frac{1}{2}$ can be different sizes depending on the whole

00:57:48 Danielle Portocarrero: equal parts of a whole

00:57:50 Sherry Maxx: fractions parts to whole numbers and beyond from abstract drawings to concrete objects

00:57:50 Carolyn Davis: equal parts in relation to the whole

00:57:52 Irma Maceachern: sets

00:57:53 Brandon Daniel: yes, magnitude

00:57:55 Kim Neill: an amount of space that is greater than zero but less than a whole--area or length

00:57:55 Susan Mitzner: equal parts how many to get to a whole

00:57:56 Ana Guerrero: located between 0 and 1 on the number line

00:57:59 Martisha Dunn: comparing using different models to represent fraction

00:58:04 Nicole Bayler: Fractions are part of a whole / set.

00:58:10 Dustin Lockwood: different ways of partitioning values or shapes

00:58:21 Dawn James: Yes! "Reading a Ruler" can now be meaningful to students!

00:58:36 Jessica Yancey: All rational numbers are fractions. It does not have

to be between 0 and 1!

00:58:47 Georgia Molina: numerator denominators
00:58:54 Fran Huntoon: No out of language - just say the number!
00:58:56 Adrienne Shlagbaum: Excellent point!
00:59:07 Darlene Bailey: Awesome when you think about the words that are used. 5 pieces size of one fourth!! $5/4$
00:59:16 Danielle Bentley: Great thinking! Thank you for sharing!
00:59:28 Colleen Feller: using distance!!
00:59:32 Renee Catalano: I like __ pieces the size of $\frac{_}{_}$.
00:59:32 Nadia Messadi: I use these terms with my students
00:59:32 Jessica Yancey: I have 5 out of four; I have more than one whole.
00:59:34 Melissa McCann: importance of precise language
00:59:34 Fran Huntoon: Numerators are adjectives and denominators are nouns
00:59:36 Kia Barrieau: Importance of multiple representations
00:59:36 Sandhya Raman: I love the language here for fractions greater than one
00:59:41 Linda Rodriguez: adjective/noun
00:59:41 Lisa Rogers: multiple representations
00:59:44 Cara Littlefield: I love how it all connects instead of using a bunch of different random representations.
00:59:44 Caitlin Harrigan: student learning lens- feels a little less risky
00:59:45 Jessica Yancey: We write what we see
00:59:45 Monique Harrell-Watford: Yes! It blows students' minds once you go over a whole. I believe it is great to use certain language school wife.
00:59:46 Liz Morris: as a teacher loving the language of five pieces the size of one fourth
00:59:47 Dave Elbourne: resonating with x number of $1/y$ s
00:59:47 Paaru Kwiatkowski: For both permission for flexibility in thinking
00:59:48 Tracey Gillies: The progression itself and how I can use this understanding to close gaps
00:59:48 Julie Vanderlugt: fractions can be used in all strands of math in a linear or geometric way.
00:59:49 Maureen O'Connell: If students see fractions as a number that can be placed on the number line, they won't be so scary.
00:59:50 Monique Harrell-Watford: wide**
00:59:53 Sarah Dickie: Student lens: language is important to give greater access to meaning
00:59:53 Jessica Alvear-Moreno: I like how each grade level builds on the previous one
00:59:53 Mark Vasicek: Wow. I love how you say "pieces"... "the size of" ...
00:59:54 Sarah Chu: its important to show a variety of different ways and representations
00:59:55 Traci Emory: multiple ways of learning a concept
00:59:55 Gail Dean: number line for sutdents
00:59:55 Sandra Ubben: Nice way to use definition to clarify - fractions may be greater than one.
00:59:55 Bobbi: different ways of showing fractions

00:59:56 Ana Guerrero: How to interpret fractions more precisely
00:59:56 Adrienne Schlagbaum: layering the various representations to develop understanding
00:59:57 Rachel Anderson: Making sure to show the visual representation with the number line so that it is easier for students to understand
00:59:57 Diane Anderson: Write what we see
00:59:58 Tina Smith: As a second grade teacher, the use of words without number representation resonates with me
00:59:59 Yvonne Arden: this has not addressed parts of a set
00:59:59 Terri Davis: I like redefining "fractions on a number line" to "fractions related to distance".
01:00:00 Sarah Mertz: As a teacher I'm really resonating with the importance of leveraging routines at the start of each lesson so that students are able to apply these skills to the mathematical task for the day.
01:00:00 Anne Carline: as a student don't rush the progression of steps. be firm on modeling first, before moving into abstract
01:00:01 Angela Cooper: Many ways to use fraction language to describe what we see visually.
01:00:01 Denise Sears: students need to move through the progression but sometimes teachers too quickly expect the abstract
01:00:02 Marissa Day: the connections between representations of fractions
01:00:03 Gricelda M.: Connections to geometry and their progression
01:00:04 Lori McDevitt: teacher - concrete to pictures
01:00:04 Mary Dahn: Importance of multiple ways of thinking about fractions
01:00:04 Michelle Green: Stress is $5 \frac{1}{4}$ pieces or $2 \frac{1}{3}$ pieces instead of the "out of"
01:00:04 Patti Gawronski: building understanding
01:00:05 Mary Jo Dunne: the importance of language used in the vocabulary
01:00:06 Shalini Singhal: progression from bars, to nl to abstract representation
01:00:06 Candice Markel: Helps me to understand why a child may struggle with fractions, where they have gaps in prior knowledge.
01:00:07 Sarah Morris: Thinking of it as 3 pieces the size of $\frac{1}{4}$ vs. 3 out of 4 pieces
01:00:08 Jolene Peterson: fantastic building blocks for future math work!
01:00:08 Fran Huntoon: the importance of unit fractions in helping students build understanding
01:00:09 Sara Klein: As a teacher....often on us to make sure that we do not isolate these understandings to the one unit on fractions...building on what they already know.
01:00:09 Sherry Maxx: using multiple ways to demonstrate fractions
01:00:10 Alicia Scott: I like the focus on the unit fraction in the description of a fraction.
01:00:11 Darlene Bailey: As a teacher, the words are important to understanding $\frac{5}{4}$ is 5 of the one fourth equal parts.
01:00:11 Lynda Krivansky: helping students move from concrete to abstract through activities
01:00:11 Jessica Yancey: Building conceptual knowledge is primary

01:00:12 Eddie Pecina: The progression of a concept

01:00:13 bakn: Never thought about an improper fraction as so many pieces
the size of the denominator.

01:00:14 Branch Pronk: I definitely want to use the language __pieces the
size of ____

01:00:14 susan mitzner: pieces are all equal

01:00:14 Jessica Alvear-Moreno: the progression

01:00:15 Brandon Daniel: representations that build upon fraction
understanding (and build)

01:00:17 Sharon Black-MacKinnon: as a student.....a deeper understanding of a
fraction

01:00:17 James Hensley: Student: I can represent fractions in a variety of
ways

01:00:18 Ute Moore: student lense: there is difficult vocab involved
with fractions

01:00:18 Rowena West: Distance

01:00:20 Sandhya Raman: Visual representation of fractions help connect
learning

01:00:21 Ann Neely: This helps me see the progression and the importance
of language.

01:00:22 Caroline Moser: getting rid of the phrase "out of" and saying 4
pieces the size of 1/5! This is such a great way to help students remember that the
D shows the size of the parts

01:00:22 Dawn James: Teacher Lens: layer upon layer (of building
understanding) is so important

01:00:25 Kathryn Villarreal: I love how this language connects so well
to the use of a numberline

01:00:25 Amy Garwell: the language we use has to be consistent- teacher.
as a student how much I just learned formulas for fractions and not what they really
represent

01:00:25 Thy Dinh: giving kids practice with all of these different
models is so critical

01:00:26 Ana Guerrero: 5 pieces the size of 1/4 rather than 5 out of 4

01:00:26 Kim Jones: the importance of using models without labels to
help build conceptual understandings of parts and wholes.

01:00:28 Kim Neill: as a teacher--that teaching fractions has a deep
conceptual knowledge piece. It's not just how many are shaded? How many are there?
As a student--that it connects to what I already know about shapes and measurement.

01:00:29 HILARY OMOKAFFE: Understanding is better off than covering
the curriculum.

01:00:29 Clara Modlin: Critical to develop an understanding of fractions as
numbers on a number line relative and equal to integers

01:00:30 Yvonne Arden: the whole can refer to a group of items

01:00:30 Alison McDaniel: geometric shapes

01:00:31 Marie Hannon: 5 out of 4-I have more than one. visualization

01:00:31 Alison Pepero: having pictures and conceptual knowledge

01:00:31 John Sasko: As a teacher - resonating - consistency and the
progression of representations - limited use of notation, building understanding
through connections. Very deliberate way of facilitating learning.

01:00:32 Paaru Kwiatkowski: Progression from concrete to abstract

01:00:32 Joan Albers: As a teacher seeing the number of pieces the same size, especially with greater than one fractions

01:00:32 Liz Walton: the progression

01:00:33 Tina Smith: As a student, these are very coherent lessons between grade levels

01:00:34 Gayle Arbaugh: my students struggle with $\frac{a}{1}$. I think formally introducing rational numbers representing them as fractions would help students to see this

01:00:34 Gricelda M.: taking the language of "out of"

01:00:35 Lisa Allen: As a teacher I am thinking of how students can understand the $\frac{5}{4}$ is 5 pieces of $\frac{1}{4}$ size. I will be using this.

01:00:36 Maureen O'Connell: such a great progression of understanding and representation; from geometric to numeric. So cool

01:00:36 Darlene Bailey: As a student I can have parts that are greater than one whole

01:00:36 Ann Neely: The move from concrete to abstract

01:00:36 leticia chapa: The importance of teaching fractions by connecting to prior understanding; using manipulatives to abstract

01:00:36 Nora Marasigan: It can be represented in several ways.

01:00:36 Anne Carline: as a teacher that terminology is important.

01:00:38 Lisa Pybus: 5 pieces the size of $\frac{1}{4}$

01:00:40 Jodi Bland: the connection between parts and whole

01:00:42 Roberta Yeager: progressions

01:00:44 Sharon Black-MacKinnon: as a teacher building the progression of fractions

01:00:46 Jessica Yancey: All math is connected. In 12 grade we are still using kindergarten math.

01:00:47 Gail Dean: trying to go backward from higher levels of math to break down tasks for lower grades

01:00:47 Susan Bardenhagen: as a teacher- you can have more than a whole's worth of pieces AND if presented correctly, students can handle this!

01:00:47 Mary-Ellen Moore: As a Ss ...how important it is to visualize and represent fractional parts with the concrete first so that they have a deeper understanding as they move to the abstract

01:00:50 Branch Pronk: I love the new ways I am seeing the representations and how they can progress

01:00:50 Lori Prantil: As a teacher how important it is to play in $\frac{k}{1}$ with blocks and manipulatives.

01:00:50 Denise Walston: the language is good - seeing the progression across grades

01:00:50 Thy Dinh: idea of unit fractions is fundamental

01:00:50 Adrienne Shlagbaum: build comfort with fractions through familiar concepts, such as geometry

01:00:50 Martisha Dunn: I'm excited about the progression of fractions through out the grade levels from a teachers lens

01:00:51 irma maceachern: Fraction - Measurement, part-whole, division, operator, ration

01:00:51 Catherine Abbott: I teach 6th grade and begin to teach negative numbers My students' misconceptions about plotting fractions on number lines dramatically affects their ability to plot negative numbers. I love the

fraction bar and number lines model.

01:00:52 marianne_mammon: student lens: understanding fractions name the size of the pieces and making copies

01:00:52 Lesly Brown: From a teacher's perspective, I am resonating with how the student would begin to better understanding parts or units of a whole.

01:00:54 Danielle Portocarrero: as a teacher I am resonating with the part of and pieces the size of terminology...because I saw my fourth graders get really confused when the fractions were greater than 1

01:00:55 Dave Elbourne: loose out of phrase

01:00:56 Camille Greene: as a teacher, fraction progression has a continuum from for students to understand the conceptual understanding

01:01:00 Victoria Campbell: isn't it funny that students can work with rulers in grades 1 and 2, have no trouble with fractional parts until grade 3 when it becomes "FRACTIONS"

01:01:06 Judy Gerwe: From Judy Gerwe visual helps students see how to represent #

01:01:07 Ute Moore: Teacher lens: importance of vocab between grade levels

01:01:10 Janet Jimenez: As a teacher it can be quite challenging when teaching fractions. Building conceptual understanding with visuals and real world objects is important.

01:01:26 Dustin Lockwood: Students need to see fractions represented in many ways, and get times to ponder them, think about them, and try to manipulate them and make conjectures about them

01:01:38 Dian Kurniawan: the same amount

01:01:39 Catherine Abbott: I notice a pyramid in the drawing

01:01:40 Gail Dean: visual pattern of building

01:01:40 Jamie Rossi: Love that it looks like a pyramid

01:01:41 Shalini Singhal: fraction strips

01:01:41 Lori Prantil: notice- 1 whole the biggest

01:01:42 Bobbi: I notice patterns

01:01:42 Sharon Black-MacKinnon: I notice the pieces are getting smaller

01:01:43 Cristy Holtzclaw: I see a pyramid

01:01:44 Colleen Feller: the pieces get smaller as you do down

01:01:46 Caitlin Harrigan: It looks like a pyramid

01:01:47 Sara Klein: There is symmetry

01:01:48 Alicia Sotello: I notice that the parts are getting smaller

01:01:49 Stephenia Courtney: All the parts make a whole

01:01:50 Fran Huntoon: The pieces get smaller as you move down the diagram

01:01:50 Brandon Daniel: whole decomposed; what are the units?

01:01:50 Shalini Singhal: pyramid

01:01:51 Sandhya Raman: I notice bricks...and I wonder why 1 is on top layer of bricks

01:01:51 Thy Dinh: many ways to describe one whole

01:01:51 Georgia Molina: pyramid

01:01:51 Gricelda M.: I notice a pyramid

01:01:51 Mark Vasicek: There is a middle line in some of the strips, but not in others.

01:01:52 Mohamed Jamaludeen Thirapusa Mohaideen: To see equal fraction

01:01:52 Eddie Pecina: The fraction book

01:01:52 Jessica Alvear-Moreno: all of the strips are equal

01:01:53 Jessica Yancey: 7 wholes

01:01:54 Cara Littlefield: I notice that some of the lines line up.

01:01:54 Ute Moore: Looks like a wall with a 1 in the top

01:01:54 Mary Dahn: It is sectioned off relative to the wholej

01:01:55 James Hensley: All rows are the same length

01:01:56 Laurie Barker: - a pyramid!

01:01:56 Paaru Kwiatkowski: More pieces in a row toward the bottom

01:01:56 Adrienne Shlagbaum: More pieces, the smaller the size of the pieces

01:01:56 Tina Smith: Notice the pieces increase by one with each line

01:01:56 Jamie Rossi: Wonder why I never looked at it in black and white

01:01:57 Renee Catalano: As you go down the page the number of pieces it takes to make a whole increase

01:01:57 Lori Prantil: wonder- smaller squares below the 1 whole

01:01:57 Khaalia Taylor: There are more pieces in each row as the size of the pieces decrease

01:01:57 Caitlin Harrigan: I wonder how it works

01:01:57 Alison Pepero: I notice a pyramid, I wonder why it is broken up the way it is

01:01:57 Kim Neill: each bar is cut into different size pieces but the bars are all the same length

01:01:57 Maureen O'Connell: Each is equal parts of the same one whole

01:01:58 Sandra Ubben: $2/2$, $3/3$, $4/4$, $5/5$ etc are equivalent

01:01:58 Joan Albers: more and smaller parts as goes down

01:01:58 Rowena West: That one whole can be many different parts

01:01:59 Ana Guerrero: Equivalent parts

01:01:59 Gail Dean: wonder what students would think about this at various grade levels

01:01:59 Dawn James: Notice: the 1 is in the center

01:02:00 Amy Garwell: equivalency of pieces

01:02:00 Michelle Green: I wonder why the top bar is the only one labeled

01:02:00 Janet Jimenez: As you move downward, the sizes are decreasing

01:02:00 Anne Carline: progression from bigger pieces to smaller pieces

01:02:00 Teresa Hammett: pyramid

01:02:00 Lori McDevitt: the more parts, the smaller each part is

01:02:00 Sara Haas: Do you ever put a different number for the top bar?

01:02:01 Tracey Gillies: The pieces are getting smaller, but the whole is the same.

01:02:02 John Sasko: The number of parts is growing as you go down. HOw far could this go?!

01:02:03 Diane Anderson: Look like a brick wall

01:02:03 Roberta Yeager: I whole and under this the equal parts that make a whole

01:02:05 Caroline Moser: i notice parts are getting smaller

01:02:05 Karin Leonard: Fraction strips

01:02:05 Colleen Feller: why isn't the "half" line going all the way down?

01:02:06 Sherry Maxx: Whole number part to 7 multiple parts

01:02:06 Tamara Dixon: Each row has equally partitioned parts

01:02:06 ANALINE BAUTISTA: I notice that each part is divided into

different equal parts

01:02:06 Kia Barrieau: Notice, each row has same sized pieces
01:02:06 Danielle Bentley: All parts to one. what are the parts
01:02:07 Melissa McCann: some vertical lines align with one another
01:02:08 HILARY OMOKAFFE: The strips are broken down into
parts.(fraction), so I wonder where do we shade?
01:02:08 Catherine Bronikowski: why no 1/7?
01:02:09 Martisha Dunn: Starts with a whole strip, then ends with smaller
pieces
01:02:09 Jodi Bland: from whole to parts
01:02:10 Lisa Pybus: equivalence
01:02:10 Mark Vasicek: I wonder how students think of this? like stairs?
01:02:11 Danielle Portocarrero: I notice that no matter how many pieces its
broken into the whole is the same
01:02:12 Fern Johnson: I wonder why the last two strips both have a middle
line - the rest alternate.
01:02:13 Deanna Rigdon: lots of equal parts
01:02:13 bakn: each line is equivalent to all others
01:02:13 Anne Carline: that they are not having to be equal on the row
below
01:02:14 Traci Emory: wonder if kids see patterns in brick buildings..
01:02:14 Lisa Allen: I notice that it looks like fraction bars, and I
wonder how they relate to learning fractions.
01:02:14 Regina Williams: Each row is one; each row has equal parts
01:02:14 Dave Hankin: Various sized pieces
01:02:15 Kim Neill: I wonder if some of the pieces are equal to some of
the others
01:02:15 Thy Dinh: the more pieces you have, the smaller each piece
will be
01:02:15 Jamie Rossi: There is only one digit
01:02:16 Marie Hannon: It looks like blocks :) pyramid
01:02:17 Sandra Ubben: more parts, the smaller each part
01:02:18 Sharon Black-MacKinnon: I wonder if a brick layer would use this
idea
01:02:18 Ana Guerrero: the parts are getting smaller as you go down
01:02:18 Julie Vanderlugt: it looks like a wall. the bricks get smaller
as you move from the top to the bottom. I notice it is symmetrical. I wonder why the
wall was built. How many little pieces in the whole wall.
01:02:19 ANALINE BAUTISTA: decomposing shapes
01:02:19 Janet Jimenez: Each row is equal to One whole
01:02:20 Angela Cooper: Notice there are no 7ths. More of the = diagrams are
displayed.
01:02:20 Sarah Chu: equal to one
01:02:21 Nicole Bayler: I notice 1 whole is broken up into many equal
pieces. I wonder how the denominator relates to the size of each piece.
01:02:21 Christopher Kenny: I notice a wall made of different sized
bricks - from smaller to larger pieces
01:02:21 Carolyn Davis: $1 = \frac{2}{2} = \frac{3}{3} = \frac{4}{4} = \frac{5}{5} = \frac{6}{6} = \frac{8}{8}$
01:02:22 Melissa McCann: symmetry
01:02:23 Stephenia Courtney: equivalent

01:02:24 Ute Moore: there is a pyramide type shape in the whole

01:02:24 Sarah Dickie: Notice: rectangle of width one, each row is a divided in to pieces equal to one

01:02:25 Teresa Hammett: Pieces that are getting smaller are equal

01:02:25 Valerie Vanderport: builds like a tower, pieces get bigger as you go up, smaller as you go down

01:02:26 Tina Smith: Parts of a whole

01:02:26 Denise Quarles: Notice: there are more pieces in each line but each line is the same length.

01:02:27 leticia chapa: All parts will equal to one

01:02:28 Dustin Lockwood: Why some fractions have a half way point with aline, but the others do not

01:02:28 Jessica Yancey: Seriously! Kids need $\frac{1}{7}$ in the manipulatives!

01:02:29 Delores Rushing: Starting with concrete to aBSTRACT IS IMPORTANT

01:02:29 Georgia Molina: starts from a whole to pieces

01:02:31 Darlene Rowe: It's easy to see what is equivalent to 1 and $\frac{1}{2}$.

01:02:31 Renee Catalano: You can easily rearrange the pieces to find equivalent fractions

01:02:31 Susan Bardenhagen: equal parts that equal one whole

01:02:33 susan mitzner: each strip is the same size but each have different number of piece

01:02:35 Anne Carline: the more pieces the smaller the pieces

01:02:38 Branch Pronk: Seeing stair steps that build relationships

01:02:38 bakn: All equal to one

01:02:39 Dave Hankin: one more piece each time

01:02:40 Dawn James: Wonder: Actually a wish – I wish the “1” was at the far right.

01:02:45 Paaru Kwiatkowski: Same size whole in the top row all the way to the bottom, but partitioned differently

01:02:45 Gayle Arbaugh: Students struggle with moving beyond the concrete model of getting to 1 whole.

01:02:46 Shannon White: The more parts, the smaller the size. As amount increases, quantity decreases.

01:02:49 Nora Marasigan: The number of blocks increase as it goes down.

01:02:50 Fran Huntoon: equivalence

01:02:51 Catherine Abbott: even numbers line up ...multiples of 3 line up

01:02:52 marianne_mammon: equivalence

01:02:52 Yvonne Arden: I notice lots of pieces, getting smaller. I wonder how students might enjoy using or making a model of this...

01:02:53 Kia Barrieau: equivalence

01:02:53 Stephanie Sikes: Equivalent fractions

01:02:54 Margie Acabal: I notice partitions/divisions and I wonder how many equal partitions are there

01:02:57 Michelle Green: equivalence- where do the lines line up and why?

01:02:59 Dustin Lockwood: Notions of odd and even

01:03:00 Mary Dahn: Relationship of parts to the whole

01:03:01 Terri Davis: Equivalent fractions

01:03:01 susan mitzner: camparison

01:03:01 Staci Erickson: Size
 01:03:01 Lori McDevitt: might notice equivalences
 01:03:01 Stephenia Courtney: divide
 01:03:03 Jessica Yancey: equivalence
 01:03:03 Teresa Hammett: equivalent fractions
 01:03:03 Lynda Krivansky: equivalent frctions
 01:03:03 Adrienne Schlagbaum: division
 01:03:04 Kathryn Villarreal: relationships
 01:03:05 Bobbi: equivalence
 01:03:05 Danielle Portocarrero: equivalent fractions
 01:03:06 John Sasko: The whole has to be same when comparing
 01:03:06 Joan Albers: what makes a whole
 01:03:07 Sandra Ubben: fractions equal to one - generalize a/a is one
 01:03:08 Paaru Kwiatkowski: Equivency
 01:03:08 Rowena West: Greater than and less than
 01:03:08 Sherry Maxx: Each line builds from 7 parts to larger equal parts
 to one whole
 01:03:09 Sarah Chu: relationships
 01:03:09 Gricelda M.: what can make a whole
 01:03:09 Ute Moore: How many pieces are in the whole
 01:03:09 Shalini Singhal: a whole could be many equal pieces
 01:03:10 Tracey Gillies: Unit thinking, decomposing, equivalence
 01:03:10 Georgia Molina: equivalents
 01:03:10 Brandon Daniel: parts to whole; equivalence
 01:03:11 Tamara Dixon: partitioning
 01:03:11 HILARY OMOKAFFE: How many parts could we shade to make up ?
 01:03:11 Terri Davis: Why aren't they all labeled?
 01:03:13 Marie Hannon: odd even
 01:03:14 Danielle Portocarrero: composing and decomposing
 01:03:15 Judy Gerwe: Judy Gerwe. More equal parts and size changes is
 smaller with more parts
 01:03:15 Maureen O'Connell: if I use all of the parts it's still one
 whole
 01:03:16 Denise Walston: size of the partitions; equivalence
 01:03:17 ANALINE BAUTISTA: equivalents
 01:03:17 Marissa Day: relationships between fractions
 01:03:18 Georgia Molina: part of a whole
 01:03:18 Nahdiyah Abdur-Rahman: How the pieces would look as they get
 smaller
 01:03:18 Gricelda M.: how many different ways a whole can be made
 01:03:18 Edna Rioveros: parts and whole
 01:03:19 Eddie Pecina: equivalence
 01:03:19 Gail Dean: Which segments line kup? What does this mean ?
 01:03:19 Gayle Arbaugh: More smaller pieces on the bottom row but the same
 length as the top row
 01:03:19 Susan Bardenhagen: younger students would see building blocks
 01:03:20 Jessica Yancey: ratio
 01:03:21 Khaalia Taylor: comparing fractions
 01:03:21 Angela Cooper: = fractions, smaller size units have greater
 denominator

01:03:22 Branch Pronk: comparing the relationships

01:03:22 HILARY OMOKAFFE: 1

01:03:23 Rachel Anderson: equivalent fractions

01:03:23 Yvonne Arden: the common total length

01:03:23 Sharon Black-MacKinnon: partitioning

01:03:24 Martisha Dunn: Equivalence

01:03:24 Shalini Singhal: $1=2/2, 3/3, 4/4$

01:03:24 Sherry Maxx: equivalence and parts

01:03:25 ANALINE BAUTISTA: equal partitioning

01:03:25 Nicole Bayler: As the denominator gets bigger the pieces get smaller

01:03:25 Julie Vanderlugt: parts

01:03:25 Mary Hamilton: more parts = smaller size

01:03:26 Marie Hannon: I wonder what the next row will be ? :)

01:03:27 Rachel Anderson: comparing fractions

01:03:27 Anne Carline: that the earlier method of dividing fraction into more parts by folding paper doesn't work now

01:03:27 Carolyn Davis: Equivalence

01:03:31 Jessica Yancey: partitioning

01:03:31 Michelle Green: odds and even

01:03:32 Mark Phipps: symmetry

01:03:33 Amy Garwell: partitioning

01:03:33 Victoria Campbell: It is such a beautiful visual of the idea that the more parts the whole is broken into, the smaller they get.

01:03:35 Shannon White: "Looks like a pyramid"

01:03:35 Thy Dinh: whole can be renamed many ways

01:03:36 Sandra Ubben: smaller the parts, the more you need to equal 1

01:03:37 Laurie Barker: Some lines line up and others don't

01:03:37 John Sasko: You can see the smaller ones in the larger ones

01:03:39 Alison McDaniel: dividing a whole into parts

01:03:43 Delores Rushing: Equivalence, relationship of whole to parts

01:03:43 Jamie Rossi: Where is there symmetry

01:03:44 Sharon Black-MacKinnon: share with more people

01:03:45 Kim Neill: equivalence, the idea that the more pieces the smaller they are--and if you're comparing them the wholes have to be the same size

01:03:47 Mary France Imperial: division, partitioning

01:03:48 Janet Jimenez: Initially, you get a feel of what knowledge students have regarding fractions

01:03:51 Regina Williams: proportionality

01:03:51 Renee Catalano: The more people you share with the smaller the piece you each get

01:03:52 Ute Moore: If the 1 represents one at the line, what about the other lines?

01:03:52 Stephenia Courtney: smaller items make 1

01:03:54 Meridith Jackson: equivalence

01:03:56 Catherine Abbott: How can I use this to divide things fairly?

01:03:58 HILARY OMOKAFFE: The parts keeps getting smaller.

01:03:59 Denise Walston: comparisons using the division of pieces

01:04:01 Martisha Dunn: Smaller pieces leading up to a whole

01:04:03 leticia chapa: Unit fractions

01:04:03 Jessica Yancey: comparing fractions

01:04:08 Dawn James: mathematical argumentation: Why does the top layer only have "1" shown.

01:04:09 Margie Acabal: equivalent fractions

01:04:09 Helene Alalouf: We tend to give the completed fraction tiles sets to students rather than letting them reach the understanding of relationships! Thank you for this idea!

01:04:49 Shalini Singhal: $1/5$

01:04:51 Lesly Brown: How many different parts anything can be broken into.

01:04:53 Shalini Singhal: $1/6$

01:04:54 Leah Watson-Rodgers: fifths and twelfths

01:04:57 Janet Jimenez: They can find the benchmark $1/2$

01:05:02 Jessica Yancey: $1/5$ and $1/2$

01:05:02 Clara Modlin: The first thing I do with fraction bars is give kids jumbled bars and have them take ~5 min to put them together like this—first thing I do in my fractions unit!

01:05:05 bakn: think about multiples

01:05:07 Jessica Yancey: $1/2$ and $1/3$

01:05:07 Ann Neely: They would break the fifths and sixths in half.

01:05:11 Thy Dinh: I agree that we label these charts too soon without having kids look at them first

01:05:12 Sarah Chu: d

01:05:13 HILARY OMOKAFFE: This activity seem advanced for grade $3/4$ don't you think?

01:05:16 Bobbi: tenths are related to fifths because 5×2 is 10. Hopefully they can figure that out

01:05:22 Nicole Bayler: $1/10$ are related to $1/5$ and $1/6$ is related to $1/12$. They can use multiples/factors to help them divide it easily.

01:05:22 Carolyn Davis: $1/2 = 5/10 = 6/12$

01:05:34 Brandon Daniel: Magnitude and size of unit. Patterns!

01:05:35 Lori McDevitt: use fifths to help determine tenths

01:05:43 bakn: factors

01:05:43 Ann Neely: I love that question.

01:05:44 Fran Huntoon: It's a great reminder of the importance of multiplicative thinking as you move to fractions.

01:05:46 Terri Davis: I love using unlabeled fraction bars so students need to figure out the units themselves.

01:05:54 Regina Williams: They would need to recognize which parts can be used to create equivalent parts - fifths should be used to make tenths, sixths should be used to make twelveths

01:06:03 Shalini Singhal: Much deeper understanding

01:06:07 Tracey Gillies: Love this for equivalency in 4th grade. Really lets them think about the relationship.

01:06:07 Melissa Magnotta: That is a great question for number lines

01:06:12 Sherry Maxx: fractions from parts to whole comparisons

01:06:21 Mary Dahn: part to total; each part is 1 section of the total number of sections

01:06:24 Amy Garwell: tying this to measurement to see fractional pieces

01:06:24 Catherine Abbott: Ooooh. I like the relationship to build the

number line. I could see using this as a review in Grade 6. Image flipping this for negative fractions on a number line.

01:06:35 Sherry Maxx: i love the number line comparisons
01:06:45 Jessica Yancey: fraction division. How many $\frac{1}{4}$ fit into $\frac{1}{2}$?
01:06:50 Monique Harrell-Watford: Yes!
01:07:19 Jessica Yancey: 4 groups of 3
01:07:19 Monique Harrell-Watford: I teach my students that all the time. You don't have to use formulas to determine equivalence. Use models.
01:07:23 Gricelda M.: 4 groups of 3
01:07:24 Shalini Singhal: 4 rows of 3 stars
01:07:24 Michelle Green: 4 groups of 3 items
01:07:25 Brandon Daniel: 4 copies of 3
01:07:26 Staci Erickson: 4 groups of 3
01:07:27 Georgia Molina: 12
01:07:28 Alicia Sotello: 4 groups of 3
01:07:28 Mark Vasicek: 12
01:07:29 Julie Vanderlugt: four groups of three
01:07:30 Megan Day: 12
01:07:30 Kia Barrieau: 4 rows of 3, 4 groups of 3
01:07:31 Tani Molina: 4 groups of 3
01:07:32 Adrienne Schlagbaum: This is exactly how I introduce this topic!!!
01:07:32 Sandra Ubben: equals 12
01:07:33 Branch Pronk: 4 groups of 3
01:07:33 Khaalia Taylor: 4 groups of 3 equals 12
01:07:33 Sarah Morris: 4 groups of 3
01:07:33 Nadia Messadi: 4 groups of 3
01:07:33 Lori McDevitt: X means groups of so 4 groups of 3
01:07:34 Meridith Jackson: 4 copies of 3
01:07:34 Julie Vanderlugt: 12
01:07:34 Ute Moore: four groups of three
01:07:35 Alicia Scott: Four groups of three things
01:07:35 Paaru Kwiatkowski: 4 groups of 3
01:07:35 Liz Morris: 4 groups of 3
01:07:35 Alison McDaniel: It equals 12
01:07:35 Susan Bardenhagen: 4 groups of 3
01:07:35 Lisa Rogers: 4 groups of 3
01:07:36 James Hensley: 4 groups of 3
01:07:36 Sandhya Raman: 4 groups of 3
01:07:36 Linda Rodriguez: 3 copies of 4
01:07:37 Tracey Gillies: Number go groups times size of the group
01:07:37 Ana Guerrero: Four groups of 3
01:07:37 Rachel Anderson: 4 groups of 3 = 12
01:07:37 Amy Garwell: 4 groups of 3 equals 12
01:07:37 Lori Prantil: 4 groups of 3 or 3 groups of 4
01:07:37 Joan Albers: 4 groups of 3
01:07:37 Marissa Day: 4 rows of 3 in an array
01:07:37 Melissa McCann: four groups of 3
01:07:38 Eddie Pecina: four groups of three
01:07:38 Mary Dahn: 4 equal groups of 3

01:07:38 Roberta Yeager: 4 groups of 3

01:07:38 Michelle Webb: 12

01:07:38 Valerie Vanderport: 4 groups of three

01:07:39 Eric Stauth: $2 \times 3 + 2 \times 3$

01:07:39 Mary France Imperial: 12

01:07:39 Terri Davis: It's 4 groups of 3.

01:07:40 Georgia Molina: 4 groups of 3

01:07:40 Alison Pepero: 4 groups of 3 is 12

01:07:41 Sharon Black-MacKinnon: 4 groups of 3 is equivalent to 12

01:07:41 Jolene Peterson: 12

4 groups of 3

3 groups of 4

01:07:41 Nora Marasigan: 4 groups of 3

01:07:41 Angela Cooper: Repeated addition of 4 three times

01:07:41 Jennifer Perri: 4 groups of 3

01:07:42 John Sasko: It's twice as much as 2×3

01:07:42 Diana Rixom: 4 sets of 3 = 12

01:07:42 Darlene Rowe: 4 groups of 3 in each group

01:07:42 Renee Catalano: 4 groups of 3 things

01:07:42 Denise Quarles: It's the same as 3×4 and $2 \times 2 \times 3$

01:07:42 Sarah Chu: 4 groups of 3

01:07:42 Maricela Sanchez: 4 groups of 3 or 3 groups of 4

01:07:43 Shalini Singhal: 3 rows of 4 stars

01:07:43 Staci Erickson: 4 rows of 3

01:07:43 Maureen O'Connell: four groups of 3

01:07:44 Diane Anderson: 4 groups of 3

01:07:44 Deanna Rigdon: 4 groups of 3

01:07:44 Lisa Allen: it is 4 groups of 3

01:07:44 Teresa Hammett: 4 groups of 3 or 3 groups of 4

01:07:44 Flora Wright: 4 groups of 3

01:07:44 Julie Secrest: 4 groups of 3

01:07:44 Thy Dinh: it's the same as 3×4 , 4 groups of 3 or 3 groups of 4

01:07:44 Gail Dean: four groups of three each or 3 groups of four each

01:07:45 Michelle Green: $3+3+3+3$

01:07:45 Adrienne Shlagbaum: $3+3+3+3$

01:07:45 Danielle Portocarrero: you either have 4 groups of 3 or 3 groups of 4

01:07:45 Janet Jimenez: 4 equal groups $3 = 12$

01:07:46 Lisa Pybus: 4 , 3 times is 12

01:07:46 Karin Leonard: 4 groups of 3

01:07:47 lynnc: The answer will be bigger, because you have more of the fours.

01:07:48 Traci Emory: 4 groups of three objects

01:07:48 Kathryn Villarreal: It means 4 copies of 3

01:07:49 HILARY OMOKAFFE: 4 rows of 3 sticks.

01:07:49 leticia chapa: 4 groups of 3

01:07:49 Jodi Bland: arrays rows and columns

01:07:49 Mark Vasicek: 4 groups of 3 parts is equal to 12 parts total

01:07:49 Fran Huntoon: It is a multiplicative relationships

01:07:49 Julie Vanderlugt: x means times or groups of
 01:07:50 Ute Moore: 4 rows 3 times
 01:07:51 Mark Phipps: 4 threes or 3 fours
 01:07:51 Alicia Scott: four copies of three
 01:07:51 Lynda Krivansky: area
 01:07:51 Susan Bardenhagen: a group of 3 4 times
 01:07:52 Anne Carline: that it is four groups of three
 01:07:52 Callie Herring: the product is the same as 3×4
 01:07:52 Gayle Arbaugh: four rows or 3 equals 12
 01:07:52 Yvonne Arden: repeat adding
 01:07:52 bakn: four rows of 3 is 12
 01:07:53 Bobbi: it is 4 three times
 01:07:53 Caitlin Harrigan: the sum is an even number
 01:07:54 Terri Davis: a group of 3, 4 times
 01:07:54 Nicole Hammell: an area of 12
 01:07:55 Victoria Campbell: an expression of multiplication
 01:07:55 Georgia Molina: 3 groups of 4
 01:07:55 Judith Harris: It is four groups of 3, it can be represented by an
 array, it is the same as 3×4
 01:07:55 Martisha Dunn: 4 groups of 3
 01:07:56 Johanna Bautista: you can count by 3 4 times or 4 3 times
 01:07:56 Jamie Rossi: 3×4 is also the same result
 01:07:56 Stephenia Courtney: 4 groups of 3
 01:07:56 Laurie Barker: it makes an array
 01:07:56 Ana Guerrero: four times THE three
 01:07:57 Sandhya Raman: 4 is being added three times
 01:07:58 Carolyn Davis: 4 groups of 3
 01:07:58 Kim Neill: 4 groups of three
 01:07:59 Sharon Black-MacKinnon: 2 copies of 3 doubled
 01:08:00 Sherry Maxx: I know it's the same as 3×4 and equals 12
 01:08:00 Nadia Messadi: array
 01:08:01 Catherine Abbott: area of rectangle with side length 4 and
 width 3
 01:08:03 Julie Kolquist: four groups of three - repeated addition of 3 fours
 01:08:03 Susan Bardenhagen: an array of 4 by 3
 01:08:03 Kristin DeLorenzo: $3 + 3 + 3 + 3$
 01:08:04 Julie Dill: Double of 2×3
 01:08:04 Paaru Kwiatkowski: four threes
 01:08:04 Roberta Yeager: 4 rows of 3
 01:08:05 Nicole Bayler: four groups of $3 \dots 3+3+3+3$
 01:08:05 Dawn James: $4+4+4$
 01:08:05 Jessica Yancey: all four 3s are the same
 01:08:06 Liz Morris: an expression
 01:08:06 Mary Hamilton: $3+3+3+3$
 01:08:07 Martisha Dunn: sets or groups
 01:08:07 susan mitzner: an array of 4 rows and 3 in each row
 01:08:07 Mary Jo Dunne: 4 groups of 3, makes an array, equals 12
 01:08:07 Fran Huntoon: 4 scaled three times or 3 scaled 4 times
 01:08:08 Anne Carline: that it is a group of 3 things
 01:08:09 Helene Alalouf: Distinguish arrays of 4 rows of 3 or 3 rows of 4

01:08:10 Rowena West: I can decompose 4 to 2 and then multiply it by 3
then add 6 to 6

01:08:11 Kia Barrieau: $(2 \times 3) + (2 \times 3)$

01:08:11 Janet Jimenez: odd \times even = even

01:08:12 Judy Gerwe: Judy Gerwe. 4 sets of 3 things

01:08:14 Jamie Rossi: You can draw a pic

01:08:16 Deanna Rigdon: 4 rows with 3 in each row

01:08:16 Gayle Arbaugh: 3×4 will equal the same product

01:08:17 Shannon White: 12 is 4 times the size of 3

01:08:23 Roberta Yeager: $4+4+4$

01:08:23 Tracey Gillies: copies of unit fractions

01:08:23 Fran Huntoon: scaling

01:08:24 Alison McDaniel: different strategies to solve the problem

01:08:25 Jet Yeung: groups of 4 things and groups of 3 =12

01:08:25 Adrienne Shlagbaum: 4 equal groups of a fractional unit

01:08:30 HILARY OMOKAFFE: Arrangement.

01:08:35 Patti Gawronski: 4 groups of 3 = 12

01:08:36 Leah Watson-Rodgers: could be $\frac{4}{3}$ - four groups of $\frac{1}{3}$

01:08:37 Mary Dahn: equal groups for both

01:08:42 Anne Carline: four groups of $\frac{1}{3}$

01:08:42 Brandon Daniel: whole number operations relating to fractions.
copies of units.

01:08:47 Judith Harris: Area

01:08:47 Mark Vasicek: An area model

01:08:47 Dave Elbourne: 4 wholes times 3 wholes

01:08:47 Dawn James: Mixed numbers

01:08:47 LARITA MITCHELL: 4 groups of 3

01:08:48 Sandra Ubben: $\frac{5}{4}$ is five one-fourths or $5 \times \frac{1}{4}$

01:08:48 Maureen O'Connell: Equal groups

01:08:48 Jessica Alvear-Moreno: groups of

01:08:48 Renee Catalano: arrays

01:08:49 Adrienne Shlagbaum: multiplication of a whole number by a
fraction

01:08:49 Lori McDevitt: area and perimeter

01:08:49 Paaru Kwiatkowski: four groups of $\frac{1}{3}$

01:08:50 Melissa Magnotta: Four groups of $\frac{1}{3}$

01:08:51 Carolyn Davis: arrays of equal groups

01:08:51 Adrienne Shlagbaum: mixed numbers

01:08:52 Tracey Gillies: Copies of unit fractions can lead to operations

01:08:52 Lynda Krivansky: area

01:08:53 marianne_mammon: equal groups of fractions

01:08:54 Melissa McCann: groups

01:08:54 Anne Carline: showing more than on3

01:08:54 Fran Huntoon: the connection to repeated addition and
multiplication

01:08:54 Meridith Jackson: thinking of 3 as a unit, moving towards unit
fraction (ie. 4 copies of 1 third)

01:08:54 Denise Quarles: $\frac{1}{4} \times \frac{1}{3}$

01:08:55 Melissa McCann: arrays

01:08:55 Alison McDaniel: improper fractions

01:08:55 HILARY OMOKAFFE: operation in fraction.
 01:08:55 Catherine Abbott: 4 groups of $3/2$'s
 01:08:56 Nicole Bayler: four groups of $1/3$
 01:08:57 Alayna Wearly: representations of fraction multiplication
 01:08:57 Shalini Singhal: distributive property
 01:08:57 Mary Jo Dunne: equal groups
 01:08:58 Amy Garwell: improper fractions
 01:08:58 Danielle Portocarrero: finding equivalent fractions
 01:08:58 Anne Carline: more than one
 01:08:58 Khaalia Taylor: four thirds as 4 copies of $1/3$
 01:08:59 Traci Emory: area
 01:09:00 Eddie Pecina: multiplying a whole to fractions
 01:09:01 Terri Davis: Use the same language: if 4×3 is 4 groups of 3, then $4 \times 1/2$ is 4 groups of $1/2$.
 01:09:01 Lisa Pybus: 4 groups of $1/3$
 01:09:01 Colleen Feller: $1/2 \times 1/2 = 1/2$ copy of $1/2 = 1/4$
 01:09:01 Rachel Anderson: 4 groups of $1/3$
 01:09:02 Janet Jimenez: Making equal groups
 01:09:02 LARITA MITCHELL: putting equal items into equal groups
 01:09:02 Brandon Daniel: iterating
 01:09:03 Georgia Molina: mixed numbers
 01:09:03 Julie Vanderlugt: multiplicative thinking
 01:09:04 Ute Moore: 4 parts of 3
 01:09:05 Yvonne Arden: multiple items or groups of items in a set
 01:09:06 Thy Dinh: multiplying unit fractions
 01:09:07 Jamie Rossi: partial products?? later on
 01:09:07 Shalini Singhal: equal groups
 01:09:09 Jennifer Russell: # of copies of a certain size piece
 01:09:11 bakn: finding equivalent fractions
 01:09:12 Mary Jo Dunne: arrays...area and perimeter
 01:09:15 Lisa Allen: Building toward $1/4 \times 1/3$
 01:09:15 Angela Cooper: $4 \times 3/1 =$
 01:09:15 HILARY OMOKAFFE: Ordering of fraction.
 01:09:16 Delores Rushing: Delores Four groups of three
 01:09:17 Gail Dean: dividing groups
 01:09:20 Branch Pronk: equal groups
 01:09:22 Alicia Scott: Four copies of size 3
 01:09:24 Edna Rioveros: repeated addition
 01:09:26 Gayle Arbaugh: going from whole number operations to operations on fractions
 01:09:31 Kia Barrieau: 4 copies of $1/3 = 4 \times 1/3$
 01:09:41 Ute Moore: equal groups and equal parts
 01:10:01 Martisha Dunn: arrays if 4×3 or 3×4 using chips to compare
 01:10:44 Fran Huntoon: Similar to some of the activities from middle school at the Math Shell Centre
 01:11:05 Georgia Molina: array
 01:12:47 Fran Huntoon: one of my favorite models - true area for fraction multiplication
 01:14:08 Gricelda M.: How do we get them out of going straight to algorithm?

01:14:10 Jessica Yancey: And kids can't learn concepts once they partially know an algorithm!

01:14:24 Shalini Singhal: Coherence

01:14:38 Sandra Ubben: So many connections for students.

01:14:39 Alayna Wearly: i have a lot to learn about fractions...

01:14:39 Caitlin Harrigan: Teacher- how this helps student build on mathematic language

01:14:41 Valerie Vanderport: Teacher: vertical alignment knowledge

01:14:42 Nicole Bayler: From a student - moving from concrete to abstract

01:14:43 Mark Vasicek: Routines. Progression. number of pieces and the size of each piece.

01:14:43 Gricelda M.: teacher: building on what they know

01:14:44 Jessica Alvear-Moreno: From both student and teacher lens is to use the VISUALS

01:14:45 Catherine Abbott: It would be very helpful to help vertical collaboration. We receive our Grade 6 students from 3 different elementary schools where they have very different experiences.

01:14:45 Anne Carline: from student - make sure that their foundation of fractions is firm prior to moving into numbers.

01:14:45 Gail Dean: student lens - concrete to abstract

01:14:45 Ann Neely: From a teacher lens you really have to be familiar with the entire path your students experience

01:14:45 Roberta Yeager: coherence

01:14:46 Shalini Singhal: student: building on what i know

01:14:47 Kathryn Villarreal: students don't enter a new grade as a blank slate!

01:14:47 Lori Prantil: teacher- need to give students the tools and the progression.

01:14:48 Kia Barrieau: Coherence is more important now than ever in light of "missed learning."

01:14:48 Stephenia Courtney: Understanding and making meaning not just the algorithm

01:14:48 Roberta Yeager: connections

01:14:48 Lori McDevitt: teacher - each grade level needs to understand the progresion

01:14:49 Julie Vanderlugt: Student lens: this are connected and build on one another so it makes more sense.

01:14:50 Patti Gawronski: multiple representations that progress coherently

01:14:50 Yvonne Arden: Student: we need more real-life examples!!

01:14:50 Renee Catalano: I love seeing the flow of fractions from kinder to 5th. We really need to do more intergrade level looks so teachers see the routines from the previous grade and can build on them.

01:14:51 Terri Davis: Love choosing a routine to connect prior knowledge to new content.

01:14:51 Linda Rodriguez: we have to get the consistence between grade levels - as in we need to retain the same teachers.

01:14:52 Sarah Chu: From a student's learning lens, its important to make sense of their learning of math

01:14:52 Christopher Kenny: Conceptual understanding is key!

01:14:52 Mary Jo Dunne: Student learning lens...its all connected!
01:14:53 Sara Haas: students thrive on visuals
01:14:53 lynnc: Always look for ways to connect things for students.
01:14:54 Teresa Hammett: Student: They would have more connection from idea to idea
01:14:54 Sara Klein: Students are really empowered when they discover the algorithm through these types of explorations and experiences.
01:14:55 Melissa McCann: educators need to understand the coherence and progression on concepts to help students make connections
01:14:56 Fran Huntoon: The opportunity for discourse and for students to make sense of what is happening. The person who talks about the math learns the math.
01:14:56 Tracey Gillies: Coherence is key. We need to think through this to purposefully plan for how kids can make connections.
01:14:57 Carolyn Craig: consistency
01:14:57 Joan Albers: build on prior knowledge and make connectons
01:14:57 Bobbi: students needs lots of visuals in both the early and the later stages of fractions
01:14:58 Marie Hannon: Visuals!
01:14:59 Colleen Feller: the connections!!!
01:14:59 Rachel Anderson: Having the visual models carry on from first grade greatly helps with understanding
01:15:00 Mark Vasicek: Student: It fits together.
01:15:00 HILARY OMOKAFFE: Visual representation of operation in fraction is better.
01:15:00 Shalini Singhal: Beautifully done
01:15:01 Angela Cooper: Student-Teachers must show many visuals of representing fractions.
01:15:01 bakn: The time spent on the conceptual learning will pay off in the end.
01:15:01 Ute Moore: teacher lens: the importance to have coherent language from one grade level to the next of math vocabulary.
01:15:02 Khaalia Taylor: Connections with whole number understandings and strategies
01:15:02 Dave Hankin: Teacher - seeing the logical progression of skills from year to year
01:15:02 Gayle Arbaugh: We need to focus our pd in domains and the coherence around that
01:15:03 Eddie Pecina: sTudent progressions
01:15:03 Traci Emory: more pictorial teaching
01:15:04 Jessica Alvear-Moreno: As the teacher--PROGRESSION---LEARN THE PROGRESSION
01:15:04 Cesely Thompson: Vertical alignment is important
01:15:05 Kia Barrieau: Students: "This reminds me of.."
01:15:06 Danielle Portocarrero: from a student learning lens the visuals help to make the connections and discussions
01:15:06 Thy Dinh: models need to be used at every level of progression language and concepts first and then algorithms much later
01:15:06 Dave Elbourne: stay away from algorithms
01:15:06 Nahdiyah Abdur-Rahman: students need spiral reviews

01:15:06 Susan Bardenhagen: student- there is a way to show how fractions connect to multi and division

01:15:06 Dawn James: Teacher Lens: Thank you for showing how the use of area helps students to understand multiplying fractions. It helped me!

01:15:07 Brandon Daniel: need for more vertical discussions between all elementary math teachers to enhance each other. Use routines to help fill in gaps

01:15:07 Ann Neely: without coherence there is no true understanding

01:15:08 Maureen O'Connell: If teachers bring this progression to students fractions lose that intimidation factor. Teachers understanding more helps so much

01:15:10 Diana Rixom: As a student you need the teacher to build from prior knowledge and not from "the text". Progression is important

01:15:10 Mary Dahn: Connections and progressions

01:15:11 Carolyn Craig: making connections

01:15:11 Alison Pepero: conceptual understanding

01:15:11 Marissa Day: how important the cohesion is from k-5. If any grade level doesn't do their part, its harder for the upper grades

01:15:14 Sharon Black-MacKinnon: Student- not so scary to do fractions with the visuals

01:15:14 Mark Vasicek: Manipulatives, too

01:15:14 LARITA MITCHELL: building on what they already know and what we know they know, lol

01:15:14 Eddie Pecina: Teacher-progressions

01:15:17 Cindy Luper: All students have access to the learning because they are allowed to explore and process.

01:15:18 Sarah Chu: from a teacher's len's its important to build on and the progression of it and incorporate the visuals

01:15:18 Sara Haas: connections!

01:15:19 Sarah Morris: Student - they need a lot of exposure and cnocepts need to build on each other Teacher - model/demonstrate prior learning and make connections to new learning

01:15:19 Julie Kolquist: student confidence - they recognize progression so they can understand

01:15:19 Denise Walston: the connections across grade levels- design lessons that will help students make connections

01:15:19 Anne Carline: make sure that you don't rush the learning. let them explore with concrete and pose questions that have more than one answer

01:15:19 Colleen Feller: fractions are beautiful!

01:15:20 fran V.: structured and coherent structure allows for deeper understanding. make sense of math

01:15:21 Melissa McCann: it's not enough to know the standards for only the grade you teach

01:15:21 Johanna Bautista: The visuals help build an understanding

01:15:22 Julie Vanderlugt: Teacher lens: The relationship and progression are so important.

01:15:22 Valerie Vanderport: Student: intentional progression of skills Teacher: knowledge of vertical alignment

01:15:23 Gail Dean: teacher break down concepts so we match where students are in their learning

01:15:23 Amy Garwell: student- how important the understanding of the

concepts is not just learning the formula. as teacher- being able to show this to students because I am not comfortable with this way.

01:15:24 Sandra Ubben: Routines are a great way to connect to previous learning and initiate rich discourse.

01:15:25 Carolyn Davis: Concrete to abstract progressions

01:15:25 Lori Prantil: students- liking pics

01:15:26 Cindy Bryant: Loved routines to invite students in

01:15:27 Nicole Bayler: From a teacher - provide many representations and usages for the different concepts

01:15:29 Fran Huntoon: Not every student has to be at the same place at the same time.

01:15:29 Diane Anderson: Conceptual

01:15:30 Shalini Singhal: I never connected arrays to fractions

01:15:30 Angela Cooper: Spiral and connect all visuals with math talk.

01:15:32 Teresa Hammett: Teacher: I like seeing how the progression uses the piece before to build that strong foundation.

01:15:32 Julie Secrest: teacher - importance of making students understand fractions by using the progression

01:15:33 Dave Elbourne: help the students along the fraction pathway

01:15:33 Jessica Yancey: Don't skip past the activities that build true mathematical understanding to algorithms just because they are faster.

01:15:34 Yvonne Arden: Teacher: show real life applications of calculating with fractions

01:15:34 Georgia Molina: making connections, visuals,

01:15:34 Nadia Messadi: building the knowledge from concrete to abstract

01:15:35 Sara Klein: Concrete belongs in the classroom all the way through, not just in the lower grades!

01:15:35 Ann Neely: purposeful planning and connecting from teachers is necessary for student success

01:15:36 Branch Pronk: lots of visuals to build understanding.

01:15:36 Gayle Arbaugh: Students need connection to prior learning in the same content

01:15:36 Mary Jo Dunne: Building on prior knowledge by being familiar with the progression

01:15:38 Khaalia Taylor: Understanding the progressions of the fractions standards

01:15:38 Phyllis Creech: Understanding the vertical alignment with fractions

01:15:39 Mark Vasicek: Yes, you have to know the whole path, upper grades, too.

01:15:39 Judy Gerwe: Judy Gerwe I work with special Ed students. These models make fraction easier to understand

01:15:40 Cindy Luper: Teachers learn a different way then they were probably taught fractions.

01:15:40 LARITA MITCHELL: Connectivity

01:15:43 Darlene Bailey: Students need conceptual understanding to move onto the algorithm.

01:15:44 bakn: Vertical planning is so important!

01:15:44 Melissa McCann: the representations are logically related

01:15:44 Liz Walton: the progression is so important

01:15:44 Danielle Bentley: Yes, teachers must know the entire path!

01:15:45 Lisa Pybus: When students connect to prior knowledge, they take ownership of their learning. For teachers, we can be confident as we start a lesson seeing what they know.

01:15:45 Danielle Portocarrero: from the teacher learning lens definitely need to know the progression.

01:15:46 susan mitzner: students are constructing their understanding which will be internalized for them.

01:15:46 Sandra Pech: the progression builds understanding so that students then "see" how the algorithms work and why they work.

01:15:48 John Sasko: T - the language is so important! You consistently used the same words and the same ways of thinking. You rarely said numerator or denominator. So - it's the representations and also the language that helps us make sense when we can connect those with what we already know.

01:15:53 Dian Kurniawan: student understanding to memorize reasoning of fraction.

01:15:53 Ute Moore: student lens: remind of what was learned before and building on that.

01:15:55 Darlene Rowe: There is a definite progression of understanding. Resist following curriculum in a certain order if it doesn't make sense for students.

01:15:58 Catherine Abbott: student....I know this stuff. I just get better at it.

01:16:01 Helene Alalouf: multiple representations and seeing what is same/different through comparing (critical thinking) to build understanding and mathematical reasoning and language.

01:16:03 Ann Neely: yes!

01:16:03 HILARY OMOKAFFE: Students should always know how to visually solve a problem no matter what.

01:16:07 Thy Dinh: helps all teachers in a site see how they build on each other.

01:16:07 Jet Yeung: teacher lens -building on what students know.

01:16:08 Denise Walston: knowing the progressions helps students make connections.

01:16:09 Victoria Campbell: It's important to allow those activities that help build the vocabulary needed to understand concepts.

01:16:09 Sherry Maxx: Connection to fractions.

01:16:19 Nahed Sabra: in a student Lens Visual and a lot of practice will help a lot.

01:16:26 Eddie Pecina: That's it?

01:16:26 Traci Emory: important to keep math language the same.

01:16:33 Maureen O'Connell: Thank you!

01:16:33 Jessica Yancey: Elementary teachers need time to work with upper grades to understand the importance of these activities.

01:16:34 Martisha Dunn: Teacher: connecting from k-4 Student: lack of gaps from k-4.

01:16:34 Fran Huntoon: Routines for Reasoning is a great book.

01:16:41 Trena Wilkerson: Thank you Kristin and Jody! Great representations and discussions!

01:16:42 Ann Neely: Thank you so much. This was so helpful and I will be watching this again with colleagues soon.

01:16:42 Melissa McCann: Thank you!
01:16:43 Lori McDevitt: thank you!
01:16:43 Georgia Molina: Thank you Kristin and Jody
01:16:45 Gail Dean: Thank you! This is motivation to continue learning.
01:16:46 Heather Steen: Thank you so much!
01:16:47 Jessica Yancey: Thank you!!
01:16:48 Shalini Singhal: Loved the presentation!
01:16:48 Camille Greene: thank you
01:16:48 Mohamed Jamaludeen Thirapusa Mohaideen: thank you
01:16:49 Catherine Abbott: PD opportunities over the summer
01:16:51 Maricela Sanchez: Thank you!
01:16:51 Sharon Black-MacKinnon: Thank you so much for sharing!
01:16:51 Lynda Krivansky: thank you!
01:16:52 Kendra Edwards: Thank you!
01:16:52 bakn: This presentation was so useful!
01:16:52 James Hensley: Thank you!
01:16:53 Traci Emory: awesome lesson!
01:16:53 Diana Rixom: Thank you
01:16:54 John Sasko: I could so this for 2 more hours - Easily!!
01:16:54 Joan Albers: Thank you!
01:16:54 Shalini Singhal: thank you!
01:16:55 Kim Neill: Thank you! I really enjoyed this!
01:16:55 Julie Secrest: very informative! thank you!
01:16:56 Sharon Ling: Thank you!
01:16:56 Lori Prantil: thanks you.
01:16:58 Eddie Pecina: Thank you for the insight
01:16:58 Dawn James: Thank you for this session.
01:16:59 Jennifer Perri: Thank you so much. It was amazing!!!!
01:17:00 Danielle Bentley: Thank you so much! Your presentation was
wonderful! I learned a TON! These presentations just keep getting better and
better!
01:17:00 Tamikia Greene: THANK YOU SO MUCH!
01:17:01 Denise Walston: thank you
01:17:01 Sherry Maxx: Thank you!
01:17:02 Darlene Bailey: Thank you! Awesome JOB!
01:17:03 Christopher Kenny: Thank you very much!
01:17:04 Nahdiah Abdur-Rahman: Thank You!!!
01:17:05 Stephenia Courtney: Thank you!!!
01:17:05 Traci Emory: thank you11
01:17:05 Branch Pronk: Thank you!
01:17:06 Lesly Brown: From a student's learning lens, I visualize how the
student begins to better understand why the numerator comes from and where the
denominator comes from.
01:17:07 Julie Kolquist: thank you!
01:17:07 Jet Yeung: Thank you for your information
01:17:09 Marie Hannon: Thank you
01:17:10 Georgia Molina: awesome job
01:17:11 LARITA MITCHELL: Thank you!
01:17:11 John Sasko: Thank you Kristin and Jody!
01:17:12 Sherry: ou

01:17:13 Edna Rioveros: Thank you... I learned so MUCH!!!
01:17:13 Daniel Irving: Thank you very much for the incredible presentation!
01:17:13 Gayle Arbaugh: Thank you!
01:17:13 Regina Williams: Thank you!
01:17:14 Diane Anderson: Thank You!!
01:17:14 Nora Marasigan: Thank you so much also! I learned a lot from you!
01:17:15 PATRICK GUERRA: thank you so much
01:17:16 Dewey Gottlieb: great session! thanks!
01:17:16 Liz Morris: Thank you!
01:17:17 Leah Watson-Rodgers: thank you!!
01:17:19 Kia Barrieau: So good!!
01:17:19 Carolyn Davis: Thank you!
01:17:20 Ana Guerrero: Thanks
01:17:20 Victoria Campbell: Thank you so much!
01:17:21 Thy Dinh: thank you
01:17:22 Sarah Chu: thank you so much
01:17:22 Phyllis Creech: Thanks
01:17:22 Nicole Young: That was amazng! Thank you!
01:17:22 Michelle Webb: thank you
01:17:22 Cindy Luper: Thanks.
01:17:23 Jessica Alvear-Moreno: Great session!!!
01:17:23 Catherine Abbott: Yes....thank you very much
01:17:24 Barb Fukushima: Thank you Kristin and Jody!!!
01:17:25 Dave Elbourne: thank you
01:17:27 Margie Acabal: Thank you so much
01:17:28 Deanna Rigdon: thank you so very much
01:17:28 Dave Hankin: Thank you from Globe, Arizona!
01:17:29 Charlene Martin: Awesome
01:17:29 Tracy Wood: Thank you so much!
01:17:30 Brandon Daniel: AWESOME!
01:17:30 Danielle Portocarrero: Thank you this was so informative
01:17:31 Rosalyn Smith: Thank you!!!
01:17:33 Maddy: Thank you!
01:17:33 Janet Jimenez: Thank you very much for this webinar. It was great.
01:17:34 marianne_mammon: thank you!
01:17:34 Sandra Ubben: Thank you for a awesome webinar!
01:17:36 Sarah Dickie: Thanks very much! Very interesting!
01:17:36 Terri Davis: Very motivating presentation!
01:17:37 Ayunda Sri Wahyuningrum: thank you so much!
01:17:37 Georgia Molina: Thank you NCTM
01:17:39 Danielle Bentley: I have already signed up!
01:17:40 HILARY OMOKAFFE: Thank you for such great presentation.
01:17:40 Shannon White: Thank you!
01:17:42 Kelly: Thank you so much for the well-thought out presentation. :)
01:17:43 Mary France Imperial: Thank you so much. I love it.. learned a lot
01:17:45 Miriam Glock: Thank you!
01:17:48 C Robertson: Thank you so much to all for presentation. Very helpful
01:17:49 Rowena West: Awesome webinair!
01:17:50 Eddie Pecina: ok Thank you

01:17:52 susan mitzner: Great presentation thank you
01:17:52 Bobbi: great way to remind us that we need to know what the students know about fractions
01:17:55 Ann Neely: Thank you to Chonda too! I appreciate your emails.
01:17:59 Katrina Baskfield: Great ideas, thank you!
01:18:01 Roberta Yeager: Thank you
01:18:02 Sara VanDerWerf: Thanks to both of you. It was a respite from the craziness and tragedy in my hometown (Minneapolis). Thanks - thanks thanks
01:18:04 Martisha Dunn: love this webinar
01:18:04 Patti Gawronski: Thank you!
01:18:06 Alison Pepero: Awesome session. Thank you!
01:18:12 Lorie Huff: Thank you Kristin, Jody, Beth, Chonda, Trena, Robert, Dave, Faith, and NCTM!
01:18:15 Danielle Bentley: Yes, Ms. Chonda! Thank you!
01:18:15 Julie Vanderlugt: Thanks so much! Lots of great information that helps fractions make sense and progress in a logical fashion connecting to other parts of math. So appreciate your ideas!
01:18:16 Catherine Abbott: I've been promoting the membership deal with my colleague.
01:18:20 Nadia Messadi: Thank you!
01:18:36 Carol Matsumoto: Thank you both for presenting. Thank you Beth, Chonda, Faith, Dave for your support.
01:18:37 Trena Wilkerson: NCTM Staff are awesome!!!
01:18:38 Khaalia Taylor: Great. Thank you!
01:18:41 Catherine Abbott: What if you have already renewed for 2 years before all this started?
01:18:41 Eddie Pecina: oh wow cool
01:18:45 Cicely Washington: Thank you this was very informative!
01:18:56 Eddie Pecina: Yes. Thank you so much
01:18:59 Mary Hamilton: thank you
01:18:59 Gricelda M.: Thank you so much!
01:19:01 Valerie Vanderport: Thank you!
01:19:07 Catherine Abbott: WHOOP WHOOP APPLAUSE APPLAUSE
01:19:08 Cristy Holtzclaw: 🙌🙌🙌🙌🙌
01:19:12 Mary Dahn: Thank you!!
01:19:13 Stephenia Courtney: AMAZING and we appreciate you SO much!!
01:19:16 Mary France Imperial: Thank you so much.. I am grateful for all you guys for sharing
01:19:16 Karin Leonard: Thank you for your time. Great information!
01:19:20 Denise Walston: 🙌🙌🙌
01:19:20 Trena Wilkerson: Go Cindy!!! Thank you so much for your leadership!
01:19:24 LARITA MITCHELL: Thank you ALL!
01:19:25 Rita shamrock: From Rita Thank you
01:19:29 Helene Alalouf: THANK YOU ALL! STAY SAFE!
01:19:29 Olga Kosheleva: Thank you.
01:19:33 Danielle Grenader: Thank you!
01:19:34 Nahed Sabra: on May 26 Th i did not get my certificate
01:19:35 Natalie Fawthrop Pooler: Amazing thanks
01:19:36 Nicole Bayler: Thank you.

01:19:36 Noe Eugenio: Thank you very much!!!
01:19:46 Charleta White-Fletcher: Thank You
01:19:47 HILARY OMOKAFFE: Its 3;58am over here in Oman.
01:19:48 Sandra Pech: thank you
01:19:52 Stacy Milas: Thank you!!!!
01:19:57 Jodi Bland: Thanks
01:19:58 Dawn James: The math training was most helpful. Thank you.
01:19:58 Fran Huntoon: Thank you!
01:20:03 John Sasko: Just clap!!
01:20:09 Mark Phipps: I was expecting ominous music
01:20:29 Gricelda M.: Will we get copies of the ppt?
01:20:42 Meaghan McIntyre: Thank you
01:20:43 Nyla Moore-McCreary: Thank you!!!!
01:20:45 Catherine Abbott: So we just print off the certificate?
01:21:04 Mark Phipps: Vampira
01:21:08 C Robertson: You guys always brighten my day, especially at the
end...funny 😊
01:21:25 Robin Harbour: You need to pay your power bill...
01:21:34 Meaghan McIntyre: It's all good
01:21:37 HILARY OMOKAFFE: Thank you guys.