

Welcome to Math Mondays

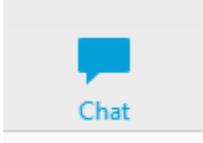
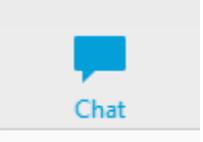


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Getting Started

- Your microphone will be muted. 
- Should you experience difficulty with your connection during the session, use the  feature, and the session moderator will assist you.
- Should you have a question for the lead during the session, please use the  feature to notify the moderator.



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Audio Connection

- To connect to audio:

click



Connect to Audio'

Connected to Audio

More Options

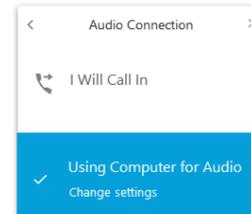
- If you are unable to connect through your computer:

click **'More Options'**

then, click **'I will call in'**

Connected to Audio

More Options



More Options



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OECTA Prayer

Creator God, we praise you, the source of all life. Renew our faith and guide us in our ministry as Catholic teachers. Let us touch the hearts and minds of those with whom we work.

Lord Jesus, share with us your counsel, so we may choose knowledge over ignorance, wisdom over waste, peace over injustice, community over isolation and service over domination.

Holy Spirit, nurture our growth. Inspire us to give birth to the creative powers within us. Let us come to the fullness of life promised in the Gospel.

Amen



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Welcome!

The First Fifteen Minutes of Math Class
by Siobhain Millen



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Ontario Catholic Graduate Expectations



A Collaborative Contributor

A collaborative contributor who finds meaning, dignity and vocation in work which respects the rights of all and contributes to the common good.



A Reflective, Creative And Holistic Thinker

A reflective, creative and holistic thinker who solves problems and makes responsible decisions with an informed moral conscience for the common good.



A Self-Directed, Responsible, Lifelong Learner

A self-directed, responsible, lifelong learner who develops and demonstrates their God-given potential.



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The First Fifteen Minutes of Math Class

To become familiar with various games, activities and routines to set the tone for a productive, collaborative mathematics class where students feel empowered and take risks.



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Questions to think about.....

Does this activity help establish the learning environment?

What curriculum expectations are being addressed?

How can it be used as an assessment for learning tool?

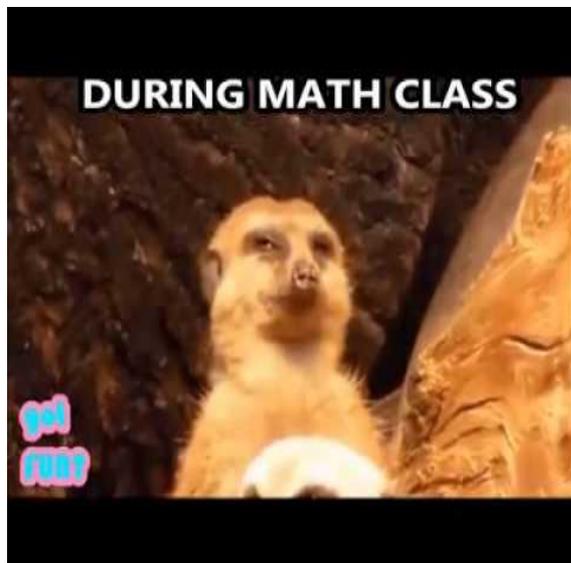


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“Evidence suggests that learning is energized by affect. We, as educators, must turn our attention to resources and strategies that improve students’ relationships with mathematics content and processes and pique students’ motivation, emotion, interest and attention. Multiple non-traditional activities and attention-grabbing resources can spark curiosity about mathematics, improve appreciation for and interest in mathematics and contribute to understanding the relevance of mathematics in everyday life.”



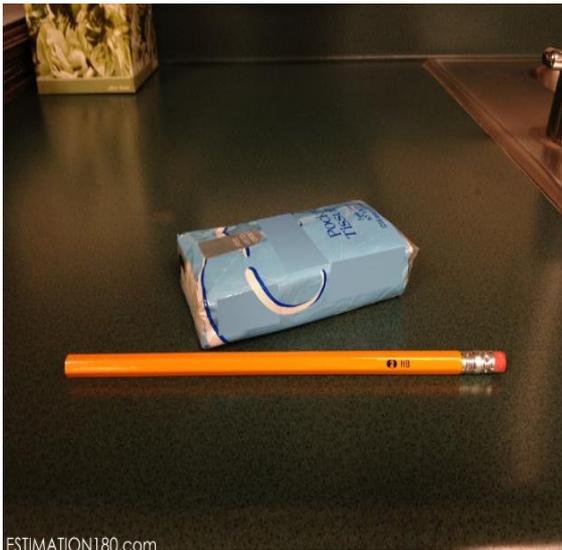
Making Math Children Will Love: Building Positive Mathitudes to Improve Student Achievement in Mathematics Dr. Lynda Colgan. Research Into Practice Monograph #56



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Estimation 180

The Tissue Problem



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Estimation 180 examples

How many shopping carts?



Answer

Make an estimate

* Required

What's too LOW? *

What's too HIGH? *

Your estimate. *

Your reasoning. *

Do better than "I guessed."

Your name. *



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How many pieces of fruit?



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- How many cups were used to build the structure?



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**Which One
Doesn't Belong?**

Why?

yellow	blue
pepper	green



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$$\frac{1}{3}$$

$$\frac{2}{5}$$

$$\frac{4}{10}$$

$$\frac{6}{7}$$

**Which One
Doesn't Belong?**

Why?



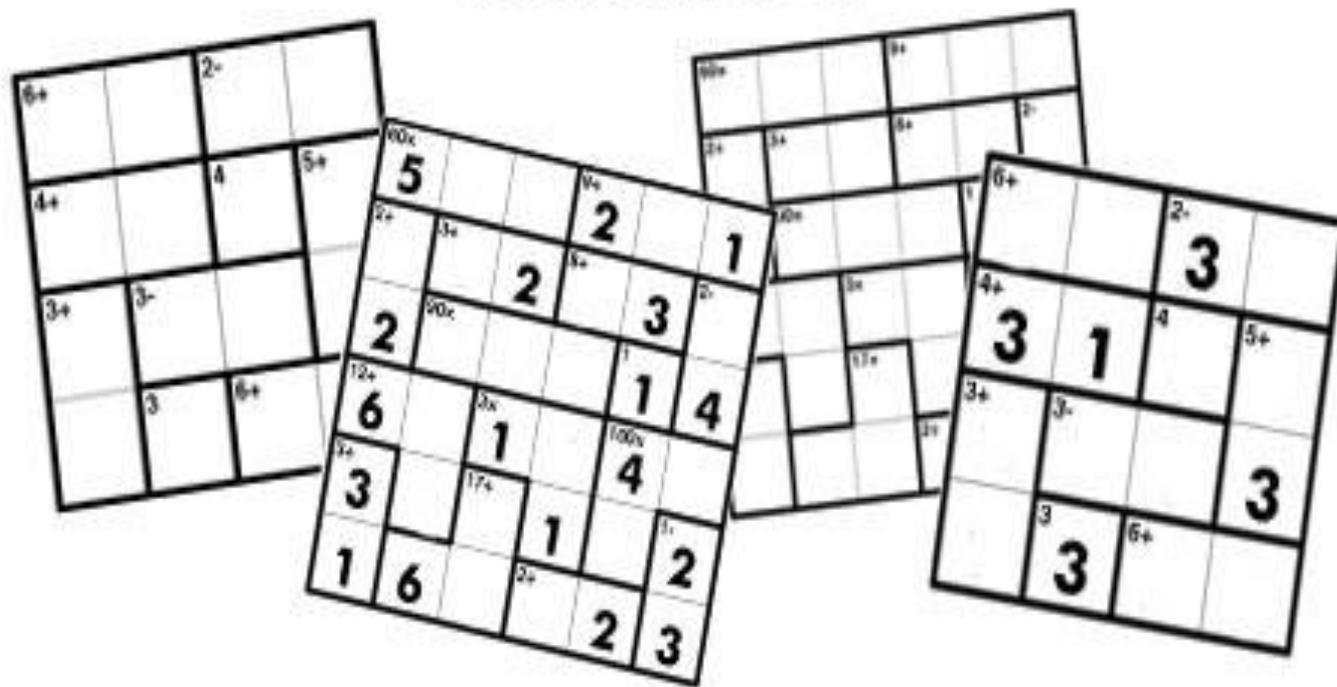
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$3+$		3
$5+$		$4+$
3		



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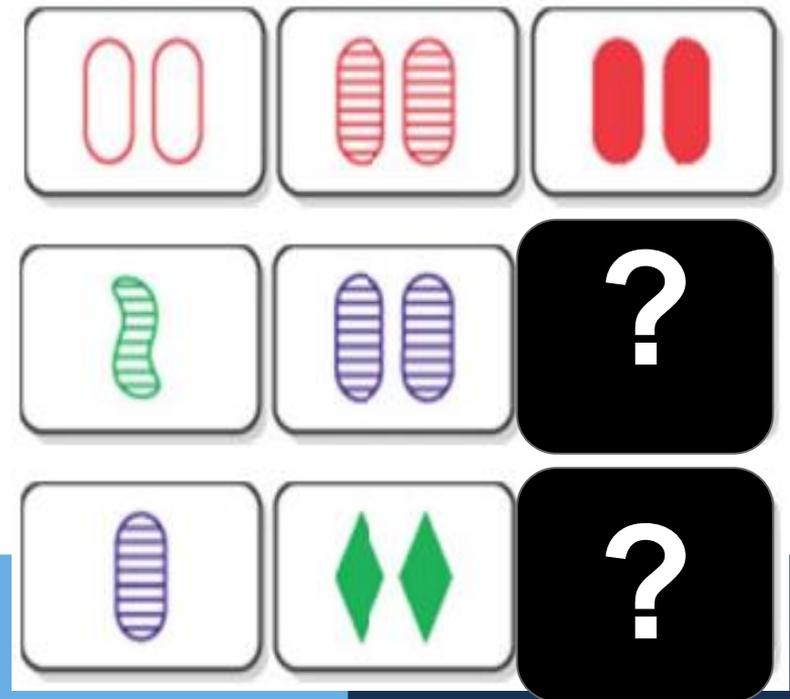
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Set Game

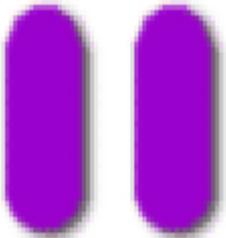
Each card has four attributes; number, colour, shading, shape. A group of 3 cards makes a “set” if looking at each attribute separately, all three cards are the same or all three cards are different.

Examples of Set

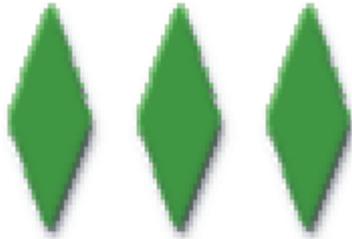


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1



2



3



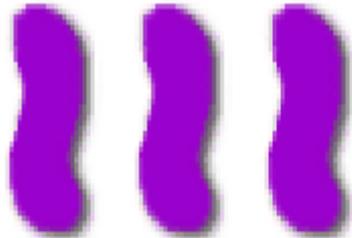
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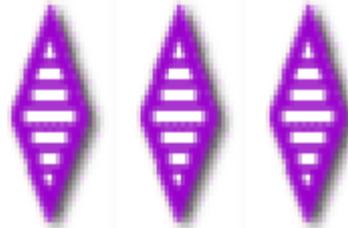
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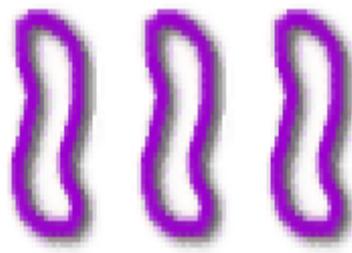
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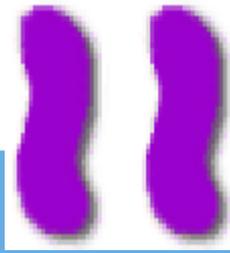
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11



12



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The Product Game

1	2	3	4	5	6
7	8	9	10	12	14
15	16	18	20	21	24
25	27	28	30	32	35
36	40	42	45	48	49
54	56	63	64	72	81

1 2 3 4 5 6 7 8 9



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Today's Number

Expand thinking of number in different situations.

Today's
Number is.....

- When is it a lot, a little? Big, small?
- Make the number using 3 addends
- Make it by dividing/subtracting
- Double it, half it
- What is the difference to your age? Your teacher's age?
- How many 10's are this number
- Do you have a connection with this number?



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Number Talks

A number talk is a discussion to provide mental math practice. The teacher poses a question, students are given time to reflect on the answer and then invited to share their strategies. Number talks encourage a sense of community as students build strategies together.

$$9 + 7 =$$

$$18 \times 5 =$$

$$24 + 27 =$$



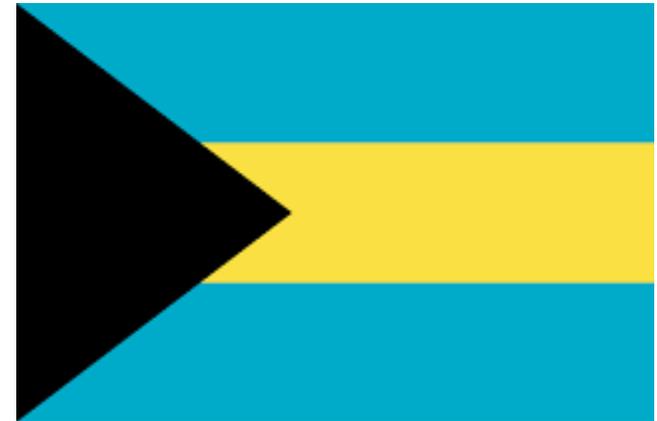
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Fraction Talks

What fraction of shape is made up of each colour?



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Counting Circles

- Count by 1's, 2's 3's
- Count by above starting at various points (by 2's starting at 26, count down by 10's starting at 230)
- Count backwards by 1, 5's 2's
- Count backwards by 10's starting from 322 (322, 312, 302, 292)
- Count by halves or other fractions ($\frac{1}{2}$, 1, $1 \frac{1}{2}$, 2)
- Count by decimals

Students sit or stand in a circle and count in different ways. Each student can participate and help one another.

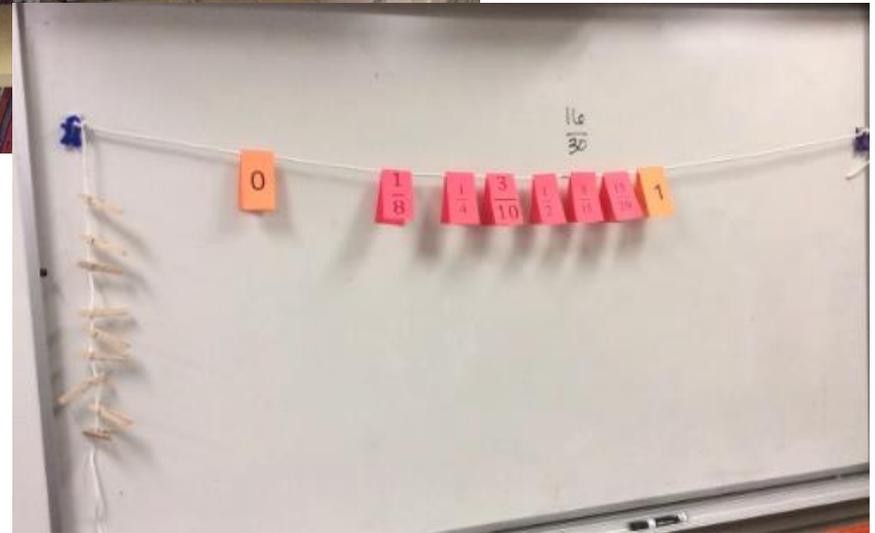
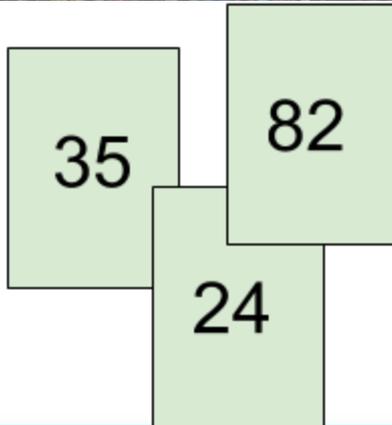


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Organic Number Lines or Clothesline Math



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Data Collecting & Weather

	Mon Apr 16	Tue Apr 17	Wed Apr 18	Thu Apr 19	Fri Apr 20	Sat Apr 21	Sun Apr 22
	Mixed precipitation	Scattered flurries	A mix of sun and clouds	Mixed precipitation	Cloudy with showers	A mix of sun and clouds	A mix of sun and clouds
							
	5 °C	2 °C	5 °C	5 °C	6 °C	9 °C	11 °C
Feels like:	1	-2	3	2	3	7	10
Night:	-1°	-1°	-1°	-1°	-2°	-1°	1°
POP:	90%	60%	30%	80%	40%	30%	30%
24 Hr Rain:	10-15 mm	-	<1 mm	1-3 mm	<1 mm	-	-
24 Hr Snow:	<1 cm	~1 cm	2-4 cm	~1 cm	-	-	<1 cm
Wind:	30 km/h E	16 km/h SW	13 km/h NW	18 km/h NW	17 km/h NW	12 km/h N	12 km/h SE
Hrs of Sun:	0	1	4	1	3	7	5

What rich mathematical conversations can we have with this data?



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Images for Math Chats

Simple images can provoke mathematical discussion. They can be made easily with manipulatives or other objects. Students can even create their own.

-*Number Talk Images* is a website with lots of ready-made images

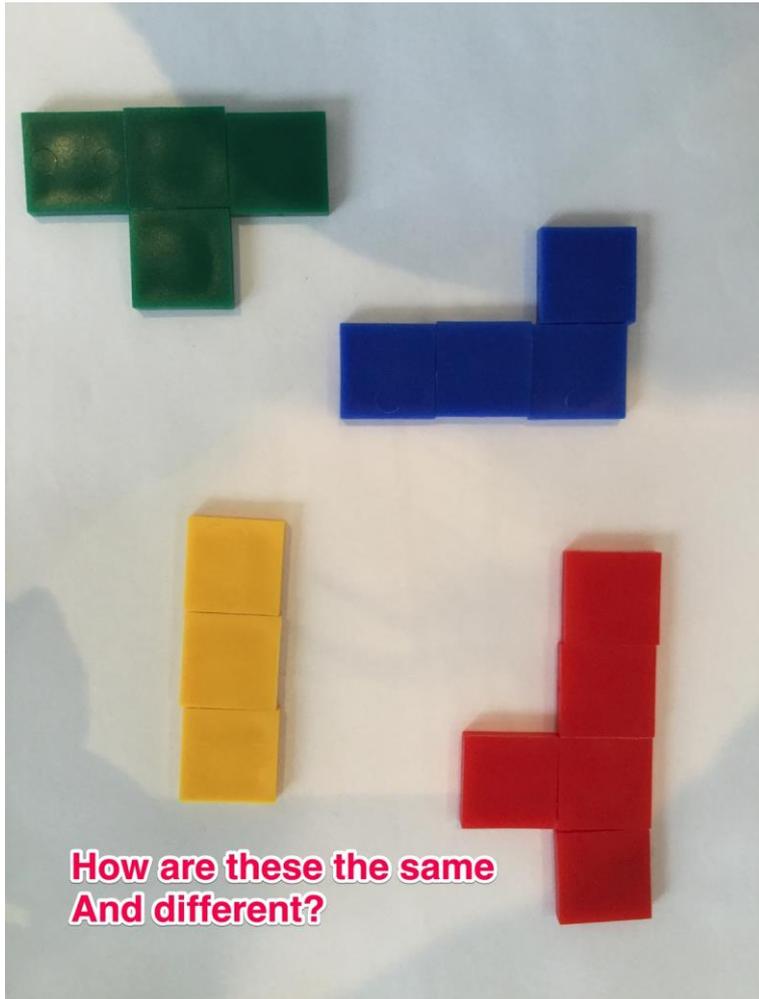
Math Talk



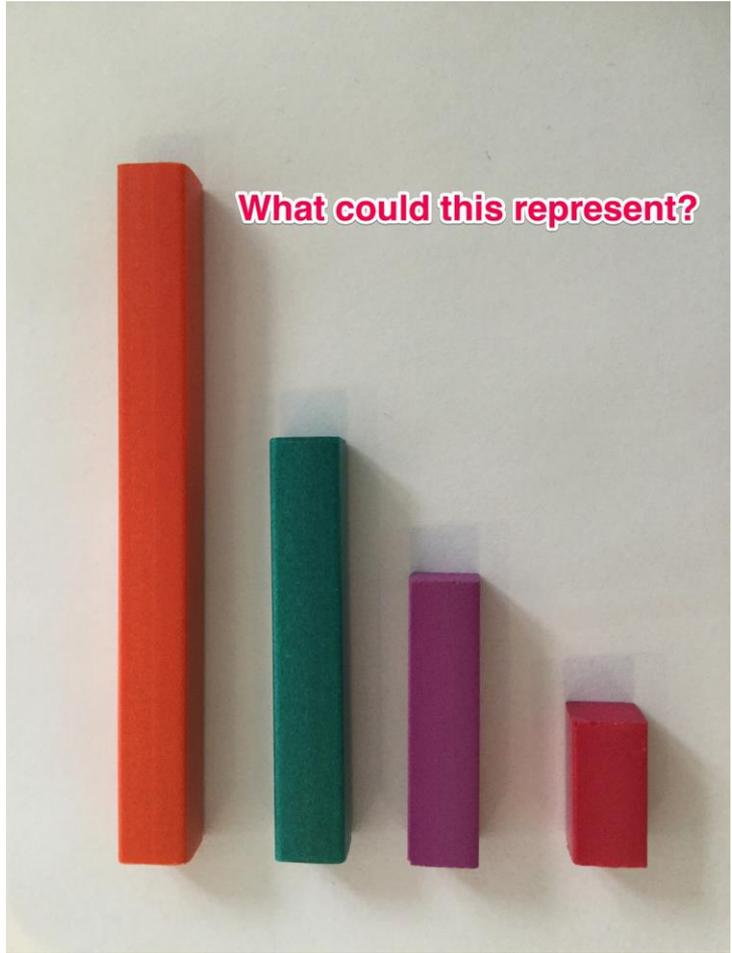
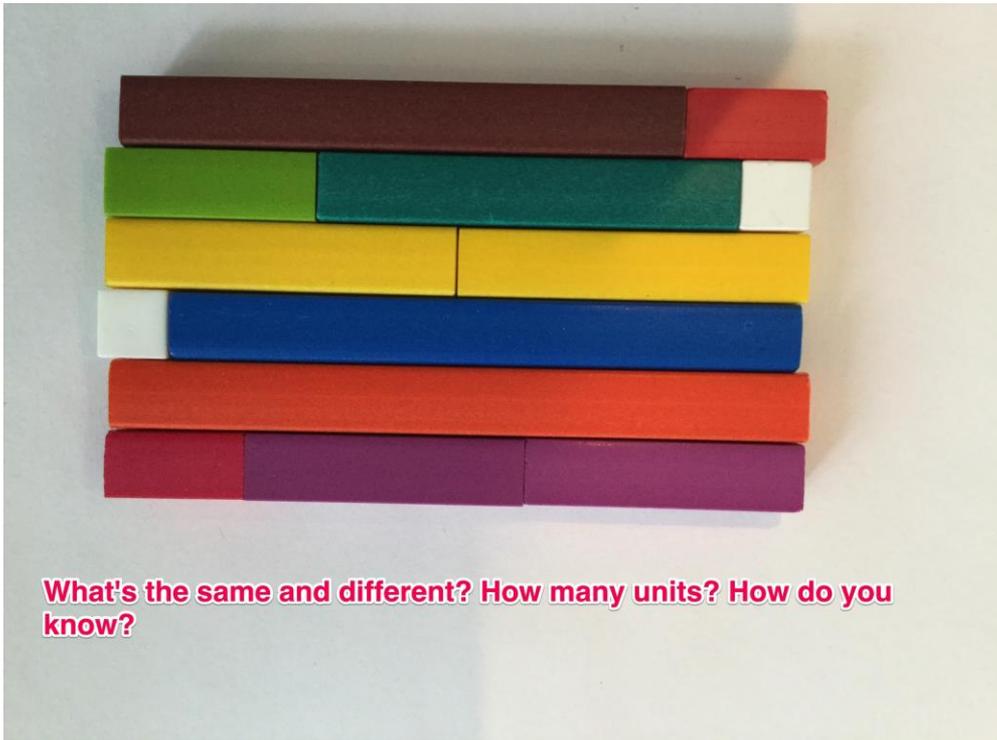
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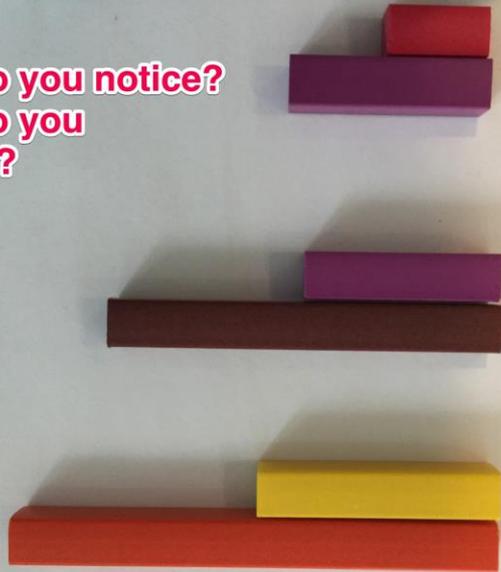


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What do you notice?
What do you wonder?



What number doesn't belong?
Can you make 20 with these numbers?



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About how long are the tractors? How high?



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Beginning with Math Routines

Math routines are;

- Done on a daily basis
- Are short & sweet
- Are responsive to students' needs
- Encourage a community of learners through mistakes, reflections and sharing



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Possible Routine Schedules

Monday	Tuesday	Wednesday	Thursday	Friday
Estimation	Counting Routine	Ken Ken	Set Game	Number Talk

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Number Talk	Number of the Day	Which One Doesn't Belong	Organic Number Line	Product Game	Number Talk

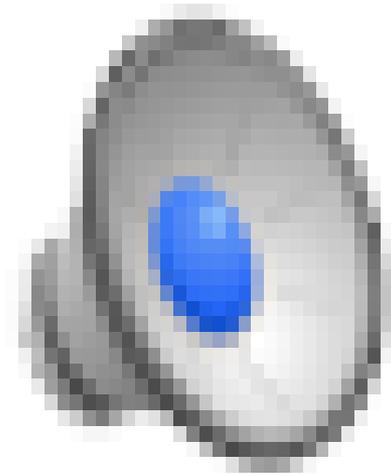


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How do these tools help alleviate math anxiety and engage all learners?



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thank
YOU
SO
much



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Sources:

1. Colgan, Dr. Lynn. *Making Math Children Will Love: Building Positive Mathitudes to Improve Student Achievement in Mathematics* Research Into Practice Monograph #56
2. Estimation180 www.estimated180.com
3. Which One Doesn't Belong www.wodb.ca
4. KenKen Puzzles at <http://www.kenkenpuzzle.com/>
5. Set Game Boards <https://bit.ly/2vhfqsB>
6. Parrish, Sherry. *Number Talks: Helping Children Build Mental Math and Computation Strategies*. Math Solutions, 2014.
7. Fraction Talks - <http://mathforlove.com/lesson/fraction-talks/>
8. Number Talk Images - <http://ntimages.weebly.com/>
9. Shumway, Jessica. *Number Sense Routines*. Steinway, 2011



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WebExperience: Math Mondays Feedback

<https://www.surveymonkey.com/r/weMathMondaysWinter18>



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Kindergarten

mathematics



- Math, Teacher Well-Being, Technology, Kindergarten
- Live weeknights
- Bite-sized and interactive
- Recorded and archived

technology



well-being



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SAVE THE DATE

Fempower

OECTA'S INAUGURAL WOMEN IN LEADERSHIP CONFERENCE

This inaugural conference will provide an opportunity for participants to dialogue, collaborate, and share experiences as women in formal and informal leadership roles in OECTA.

Look for conference and registration details in the fall.

WHEN

The evening of November 22 and all day November 23

WHERE

Toronto

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THIS CONFERENCE IS OPEN TO WOMEN ONLY.



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