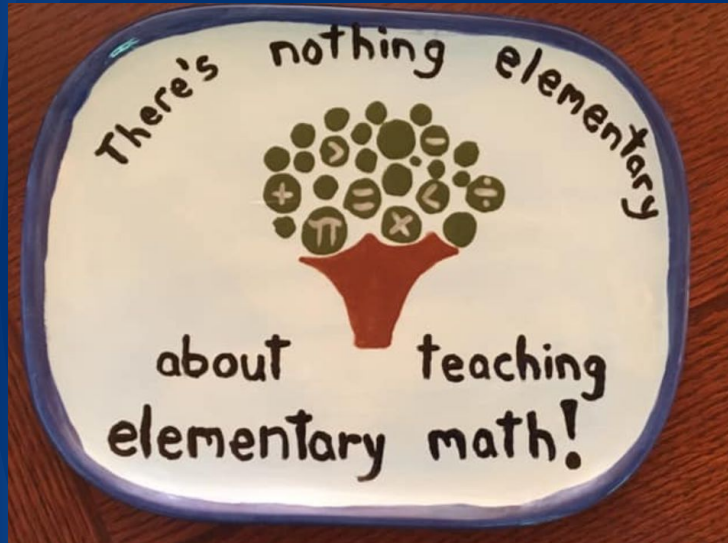


Subtraction is the Achilles Heel of Students: But It Doesn't Need To Be!



Ann Elise Record, M.Ed., NH Math Specialist



www.anneliserecord.com

Email: aer@anneliserecord.com



Facebook: Ann Elise Record (w/ this logo)



Facebook groups: [Elementary Math with Ann Elise](#), Facilitator of [Math Running Records](#) and [Build Math Minds](#)



Twitter: @AnnEliseRecord



Instagram: [ann.e.record](https://www.instagram.com/ann.e.record)

padlet of resources



<http://www.tinyurl.com/MathRR>

Convince me....



$$52 - 38 = 54 - 40$$

What was your thinking?



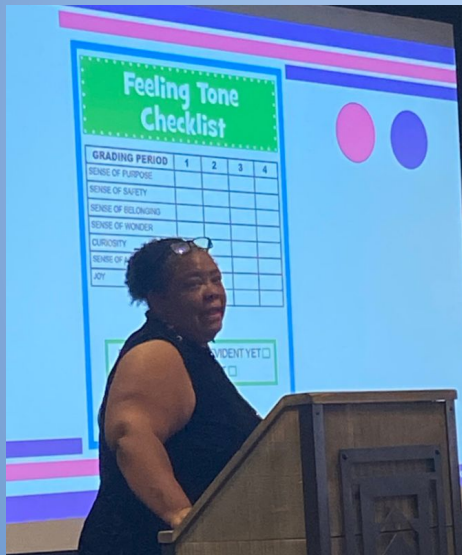
Ann Elise Record (she/her) @AnnEliseRecord · Oct 20

We need to “curb the compulsion to calculate”! YES!!! @AmyLucenta
@ATMNE_math @VermontMath @NHTM1964 #FallInLoveWithMath

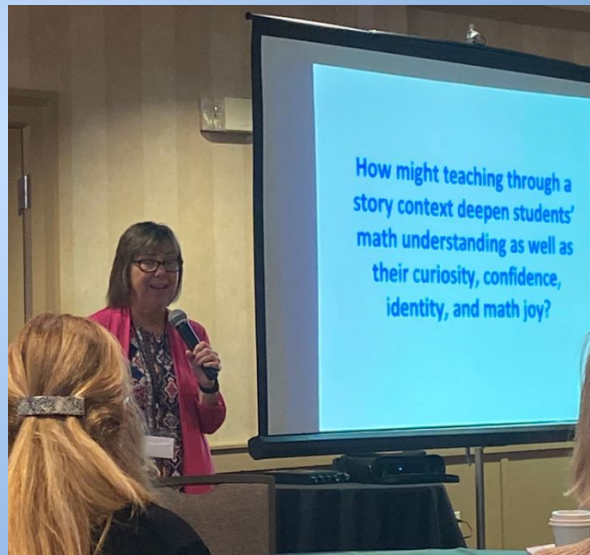


What math do we want students to learn?

How do we want our students to FEEL while they are learning math?



Dr. Nicki Newton



Sue O'Connell

(Roberts,
2018)

Webinar Agenda

Early Learning Trajectories for Subtraction

Powerful Strategies and Models for ALL
sets of Numbers

Daily Routines that Develop Fluency

Padlet

www.tinyurl.com/MathRR

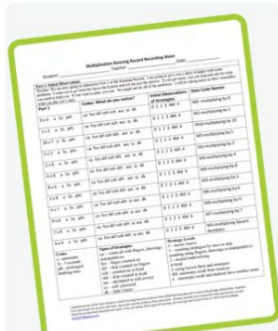
Ann Elise Record • 6h

Math Running Records FB

There is nothing elementary about teaching elementary math!

Dr Nicki Newton's and Ann Elise Record's online resources

Dr. Nicki's Math Running Records website - this is where you will download the recording sheets

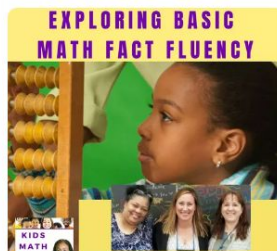


mathrunningrecords.com

Home

Favorite Podcasts - many are interviews with Dr Nicki and/or Ann Elise

Kids Math Talk Podcast interview with Dr. Nicki Newton, Dr. Alison Mello, and Ann Elise Record

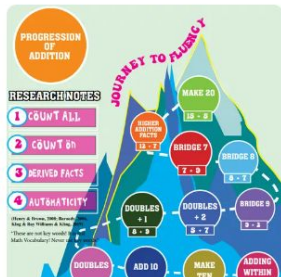


Exploring Basic Math Fact Fluency - An Interview with Dr. Nicki, Alison, and Ann Elise

Exploring Basic Math Fact Fluency - An Interview with Dr. Nicki, Alison, and Ann Elise

Dr Nicki Newton's Progression Charts for all operations

Addition Fact Progression Mountain Chart and other Resources - copy and paste this link:
https://drive.google.com/file/d/1U_pYXwA53B12q7MNVwxyF18A87szF42/view?usp=sharing



Videos

Welcome video from Ann Elise 2022



MRR Welcome 2022.mp4

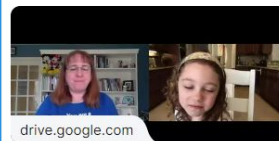
Welcome video!



Math Running Records Welcome!

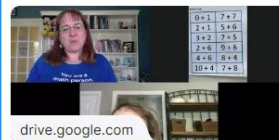
Math RR and Analysis

Addition RR Gr1



AddRR G1 S1.mp4

Addition RR Gr 1



AddRR G1 S2.mp4

Addition RR Grade 1 Analysis



Slow down so we can go faster later.

Christina Tondevold



www.buildmathminds.com

Think of a story problem that $8-5$ could be used to solve.



Includes Extensive
Online Video

Second Edition

Children's Mathematics

*Cognitively
Guided
Instruction*

Thomas P. Carpenter
Elizabeth Fennema
Megan Loef Franke
Linda Levi
Susan Empson

Heinemann
Publishers in Mathematics



Which words or phrases stand out to you?

“One of the most useful ways of classifying word problems focuses on the types of action or relationships described in the problems. Research has shown this classification corresponds to the way that children think about problems. As a result, this scheme distinguishes among problems that children solve differently and provides a way to identify the relative difficulty of various problems.”

Thomas Carpenter et al. *Cognitively Guided Instruction* 2nd ed. pg 7

Delia had 8 cookies. She ate 5 of them. How many did she have left?



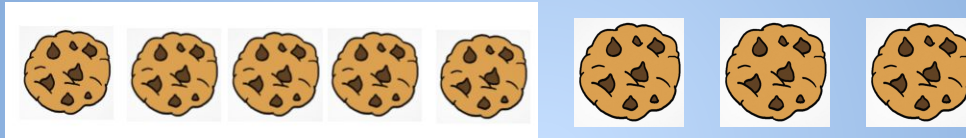
Take From

Delia had 8 cookies. 5 of them were chocolate chip and the rest were sugar. How many were sugar?



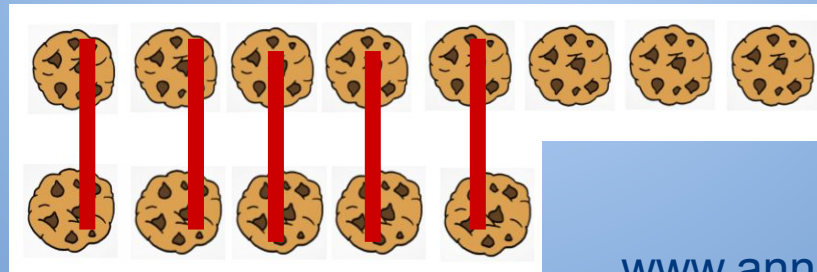
Part Part
Whole

Delia had 5 cookies. She was given some more. Now she has 8. How many more was she given?



Add To

Delia has 5 cookies and Kylynn has 8. How many more cookies does Kylynn have than Delia?



Comparison

Word Problem Types

Add to (Join)

action that increases the amount of objects

Put together/Take apart (Part-Part-Whole)

joining together of two categories of objects

Take from (Separate)

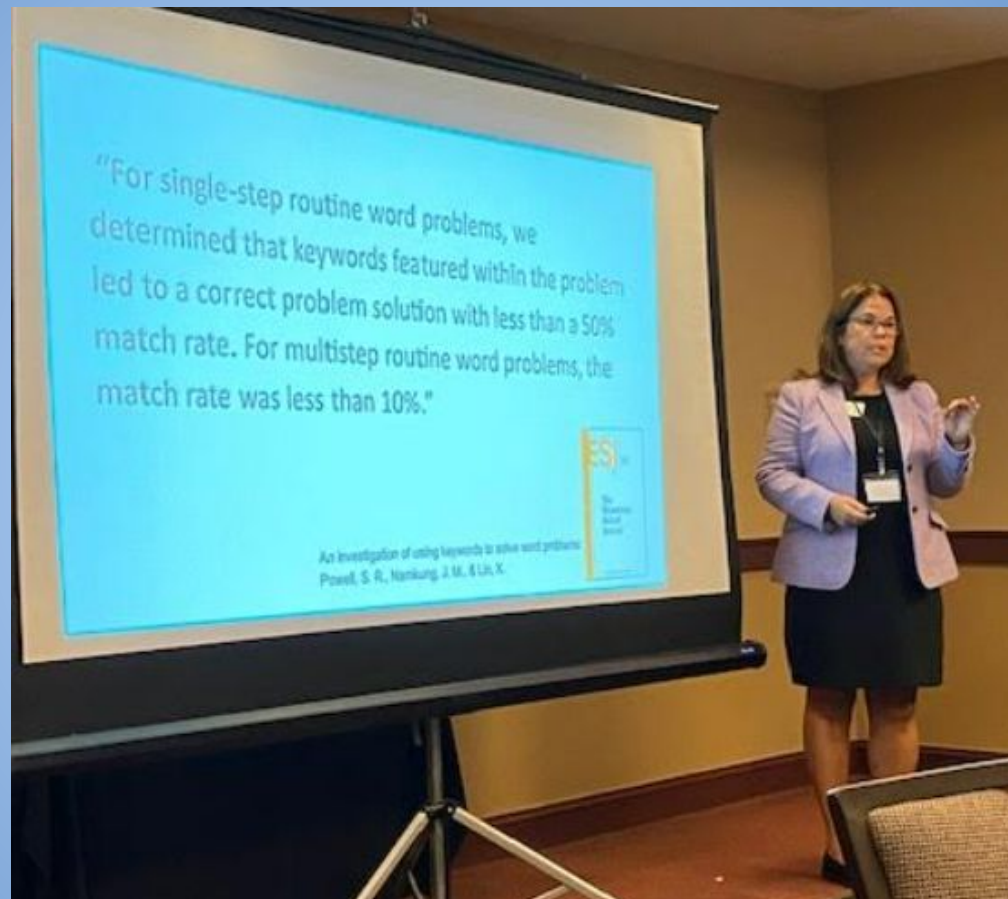
action that decreases the amount of objects

Comparison

two groups of objects being compared

	Result Unknown	Change Unknown	Start Unknown
Add To (Join)	John had 4 balloons blown up. His brother blew up 8 more for him. How many balloons does he have blown up now?	John had 4 balloons blown up. His brother blew up some more. Now he has 12 balloons blown up. How many balloons did his brother blow up?	John had some balloons blown up. His brother blew up 8 more. Now he has 12 balloons blown up. How many balloons did he have blown up to start?
Take From (Separate)	John had 12 balloons blown up. His brother popped 8 of them. How many balloons does he have blown up now?	John had 12 balloons blown up. His brother popped some of them. Now he has 4 balloons blown up. How many balloons did his brother pop?	John had some balloons blown up. His brother popped 8 of them. Now he has 4 balloons blown up. How many balloons did he have before his brother popped some?
Put Together/ Take Apart (Part-Part-Whole)	Total Unknown	Addend Unknown	Both Addends Unknown
	John had 8 red balloons and 4 blue balloons. How many balloons does he have?	John had 8 red balloons and the rest are blue. If he has 12 total balloons, how many blue balloons does he have?	John has 12 balloons some are red and some are blue. How many of each color could he have?
Compare	Difference Unknown	Bigger Unknown	Smaller Unknown
	John has 12 balloons. His brother has 8. How many more balloons does John have than his brother?	John has 4 more balloons than his brother. His brother has 8 balloons. How many balloons does John have?	John has 4 more balloons than his brother. John has 12 balloons. How many balloons does his brother have?
	John has 12 balloons. His brother has 8. How many fewer balloons does his brother have than John?	John's brother has 4 fewer balloons than John. His brother has 8 balloons. How many balloons does John have?	John's brother has 4 fewer balloons than John. John has 12 balloons. How many balloons does his brother have?

~~Key Words~~



@amylucenta

Strategies

(what we do with the numbers)

Count back

$$8 - 2 \Rightarrow 8 - 7 - 6$$

Count up

$$8 - 6 = 6 - 7, 8 \dots \text{so } 2$$

Bridge 10

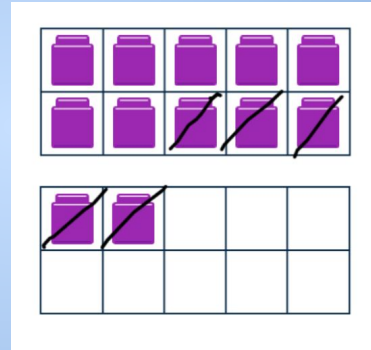
$$12 - 5 = 12 - 2 - 3 = 7$$

vs

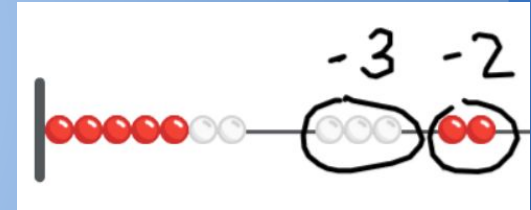
Models (CRA)

(how we make our thinking visible)

$$12 - 5$$



$$12 - 1 - 1 - 1 - 1 - 1$$



$$12 - 2 - 3$$

What is the thinking right after this moment?



Discussions prompts:

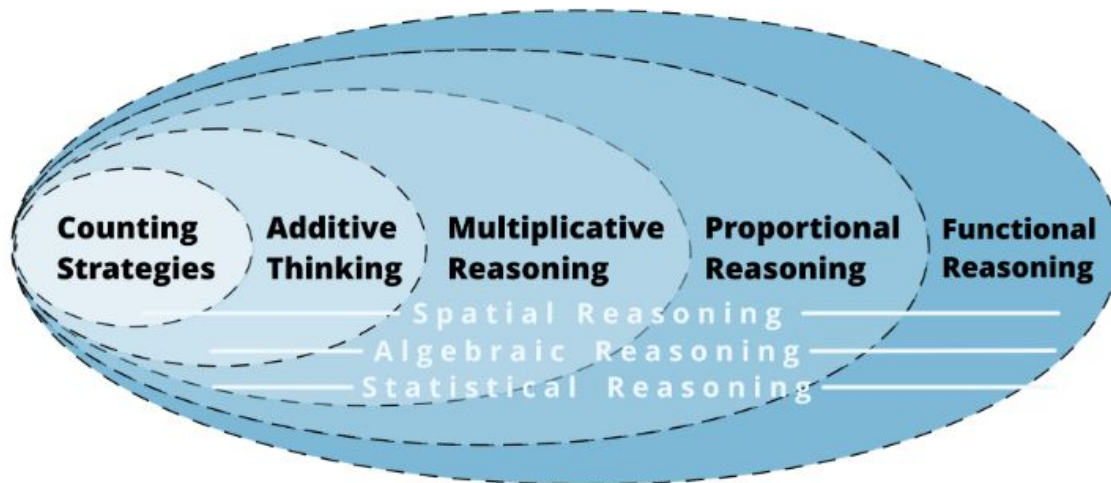
How do you know?

What did your brain just do?

Prove it?

How would help a friend who doesn't know it?

The Development of Mathematical Reasoning



PAM HARRIS

Do these look familiar?

$$\begin{array}{r} \overset{0}{\cancel{1}}\overset{1}{4} \\ - 8 \\ \hline \end{array}$$

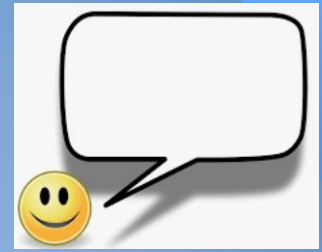
$$\begin{array}{r} \overset{0}{\cancel{1}}\overset{9}{\cancel{0}}\overset{1}{\cancel{2}} \\ - 98 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 435 \\ - 298 \\ \hline 263 \end{array}$$

What's the thinking here?

$$\begin{array}{r} 5 \overset{1}{\cancel{6}3} \\ - 37 \\ \hline 26 \end{array}$$

Number Sense is....



“...good intuition about numbers and their relationships. It develops gradually as a result of exploring numbers, visualizing them in a variety of contexts, and relating them in ways that are not limited by traditional algorithms.

Howden (1989)

What words stand out to you?

Number Sense

Early Numeracy Concepts

- Verbal counting
- Object counting
- Cardinality
- Subitizing

Number Relationships

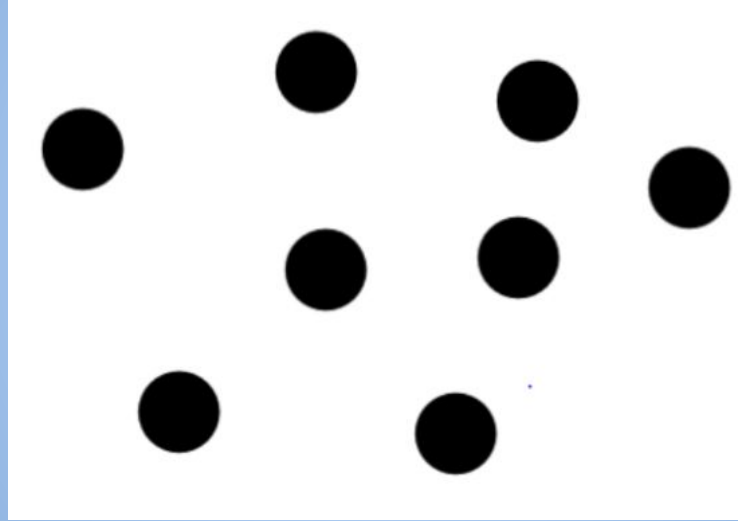
- Spatial Sense
- 1 unit more/1 less
- Benchmark of 5 & 10
- Decomposition

Subitizing

ability to know how many without counting

How many dots do you see?

Would you bet me a pizza?



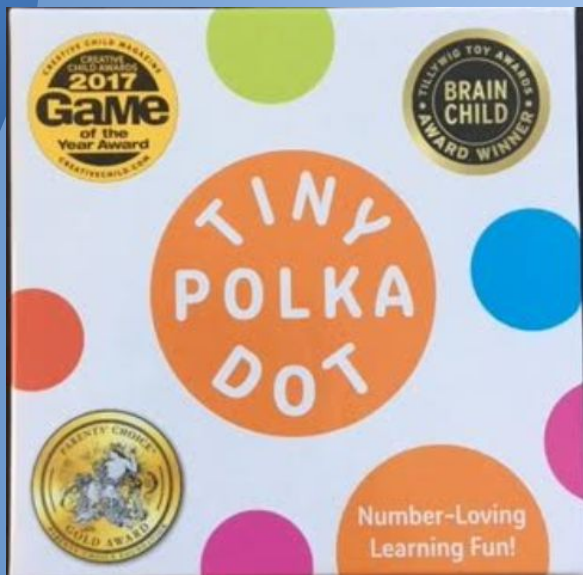


Savvy Subitizing Cards



Christina Tondevold's store: <https://buildmathminds.com/shop>

Tiny Polka Dot



<https://tinypolkadot.com/> Dan Finkle's site mathforlove.com

What words come to mind when you think about math fact fluency?



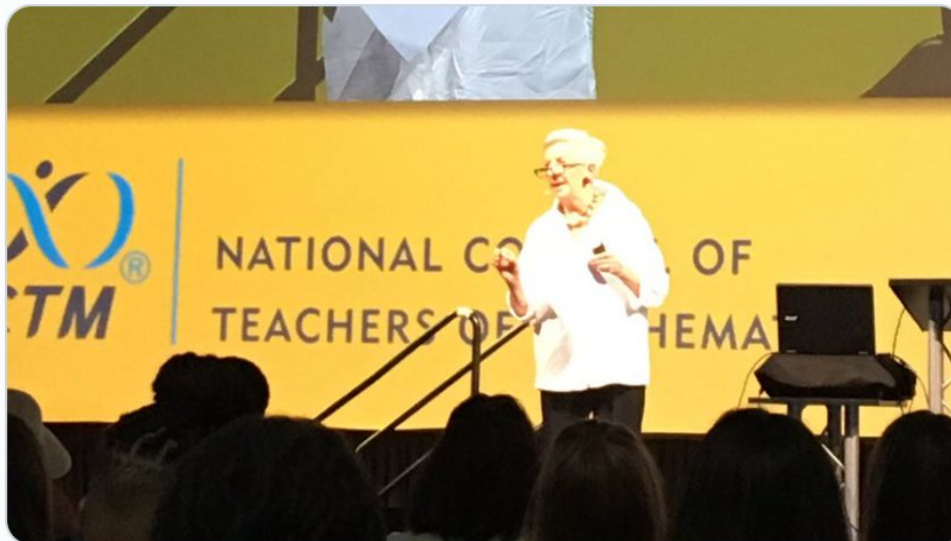
It's imperative we separate speed from being good at math!



Ann Elise Record @AnnEliseRecord · Apr 5

"Timed tests had a birth... they can have a death!" Marilyn Burns

YES!!!! #NCTMSD2019 #ElemMathChat #MTBoS #iTeachMath



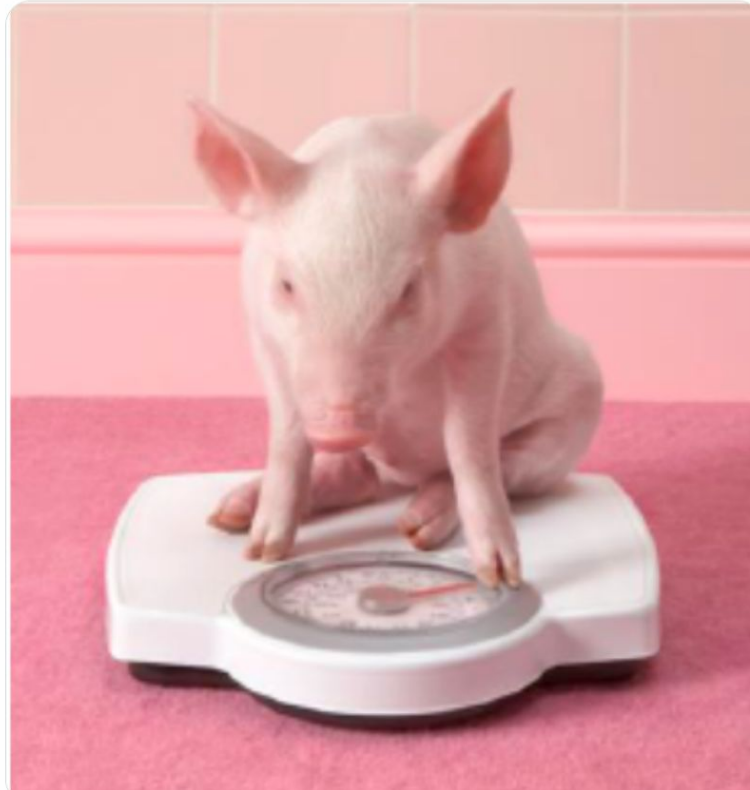


You Retweeted



TJ Jemison M. Ed. 🇪🇺 😊 🍏 @teedjvt · Dec 9

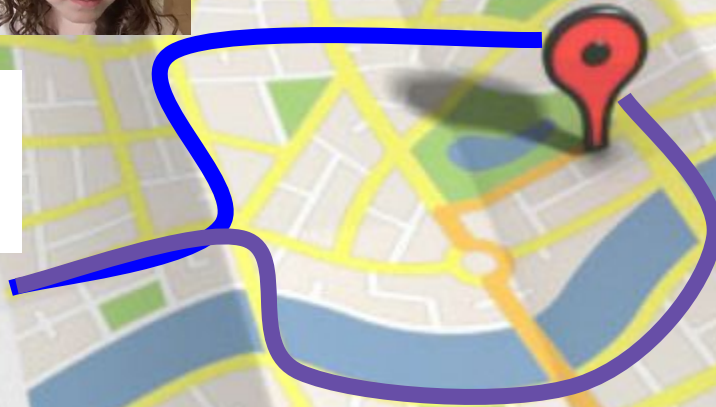
Here's my google image for our discussion around ch. 2: of Figuring Out Fluency Inspired by @JohnSanGiovanni saying: "You can't fatten a pig by weighing it... you can't build fluency by only assessing it". #MathFluency #Math #Math4All @JBayWilliams



Math Fact Fluency



$\begin{array}{r} 6 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ \times 3 \\ \hline \end{array}$
$\begin{array}{r} 5 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 11 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 4 \\ \hline \end{array}$
$\begin{array}{r} 3 \\ \times 10 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 12 \\ \hline \end{array}$
$\begin{array}{r} 3 \\ \times 12 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 11 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 3 \\ \hline \end{array}$



Math Running Records

$$15 - 8$$



www.brainingcamp.com

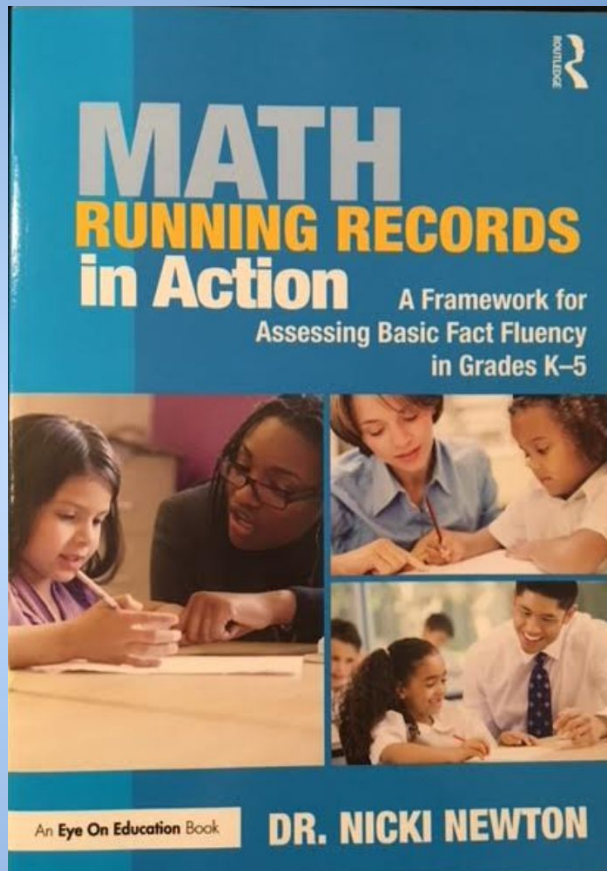


www.anneliserecord.com

What is Fluency?

*Being fluent means that students are able to choose **flexibly** among methods and strategies to solve contextual and mathematical problems, they understand and are able to explain their approaches, and they are able to produce **accurate** answers **efficiently**.*

Principles to Actions: Ensuring Mathematical Success for All. (2014)
NCTM: Reston, VA.



www.mathrunningrecords.com

What are Math Running Records?

- free
- research-based and asset minded 1-1 interview on basic facts for all operations
- administered 3 times a year
- intention is to learn about the thinking of the students so that we can develop instructional responses

www.mathrunningrecords.com



About Dr. Nicki Newton

Dr. Nicki Newton is an education consultant who works with schools and districts around the country and Canada on k-8 math curriculum. She has taught elementary school, middle school, and graduate school. Dr Nicki has an Ed.M. and an Ed.D from the Department of Curriculum and Teaching at Teachers College, Columbia University specializing in Teacher Education and Curriculum Development. She is greatly interested in teaching and learning practices around the world and has researched education in Denmark, Guatemala and India. She has written 9 books and is currently working on one about imagination, wonder and creativity in schools.

[CONTACT DR. NICKI](#)

[TAKE ONLINE COURSE](#)

Running Record - 3 parts

Part 1 - Benchmark questions for automatic recall and accuracy (1 minute)

Part 2 - Strategy interview (7 minutes)

Part 3 - Math disposition (1 minute)

****ALL aspects of fluency plus disposition****

Subtraction progression

w/in 5

Sub 0

Sub 1

Sub self

Sub within and from 5

w/in 10

Sub within 10

Sub From 10

Diff of 1

Sub 10 from teen

w/in 20

Sub ones from teen

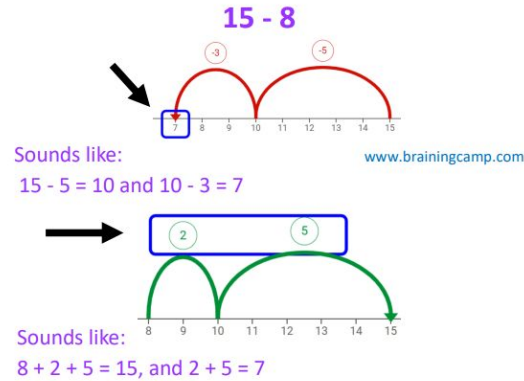
Half facts

Bridge 10

Sub from 20

Student Page	
2 - 0	12 - 11
7 - 1	17 - 10
9 - 9	13 - 3
5 - 4	14 - 7
8 - 3	15 - 9
10 - 2	20 - 8

Subtraction Math Fact Journey



Mastery with understanding

How do you know? I just know it.

What about a friend who doesn't know it, how would you help them? I would tell them to use 10 to help them.

What is $22 - 18$? I would think $18 + 2 + 2 = 22$, so $22 - 18 = 4$.



Derived Strategies

Count back or up in head

Sounds like (usually bobs head as counting)--> 7-6-5-4-3-2
OR 6 --> 7,8

Count back or up objects or fingers

Sounds like: (fingers go up as count) --> 7,6,5,4,3,2
OR 6 --> 7,8

8 - 6



Count all objects or fingers

Sounds like: (shows 8 fingers) --> 7, 6, 5, 4, 3, 2

Mastery with memorization

How do you know? I just know it.

What about a friend who doesn't know it, how would you help them? I would tell them to get flashcards and practice.

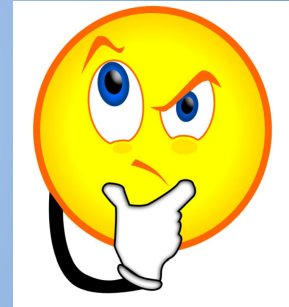
What is $22 - 18$? I didn't learn that one yet.

What is the suggested progression students go through to learn their facts?

Add and subtract within 5

Add and subtract within 10

Add and subtract within 20





Observe

Notice student was counting back within 5 and 10 if didn't know it.



Analyze

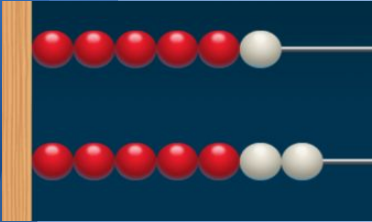
Determine Sub w/in 10 facts at a Level 1 for finger counting back



Plan

Whole group: Number talks
Small group: Provide opportunities for decomposing all the numbers up to 10

Cycle of Engagement



Explore strategies and number relationships



Play games encouraging dialogue



Assessment - observations while playing games or mini-interview



Math Running Records



Videos of RR, data file to analyze the information learned, Google Drive folder project to have free resources, Facebook Live events

Number sense can't be taught. It needs to be caught.

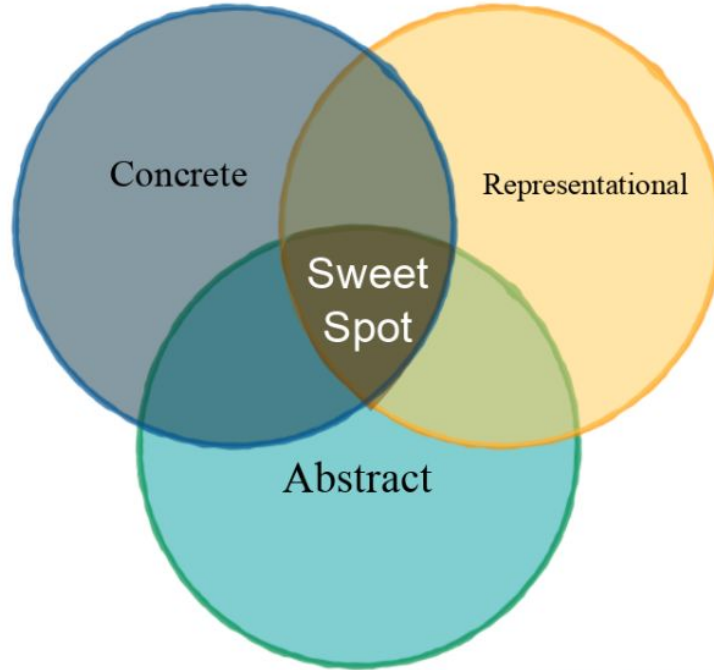
Christina Tondevold



www.buildmathminds.com

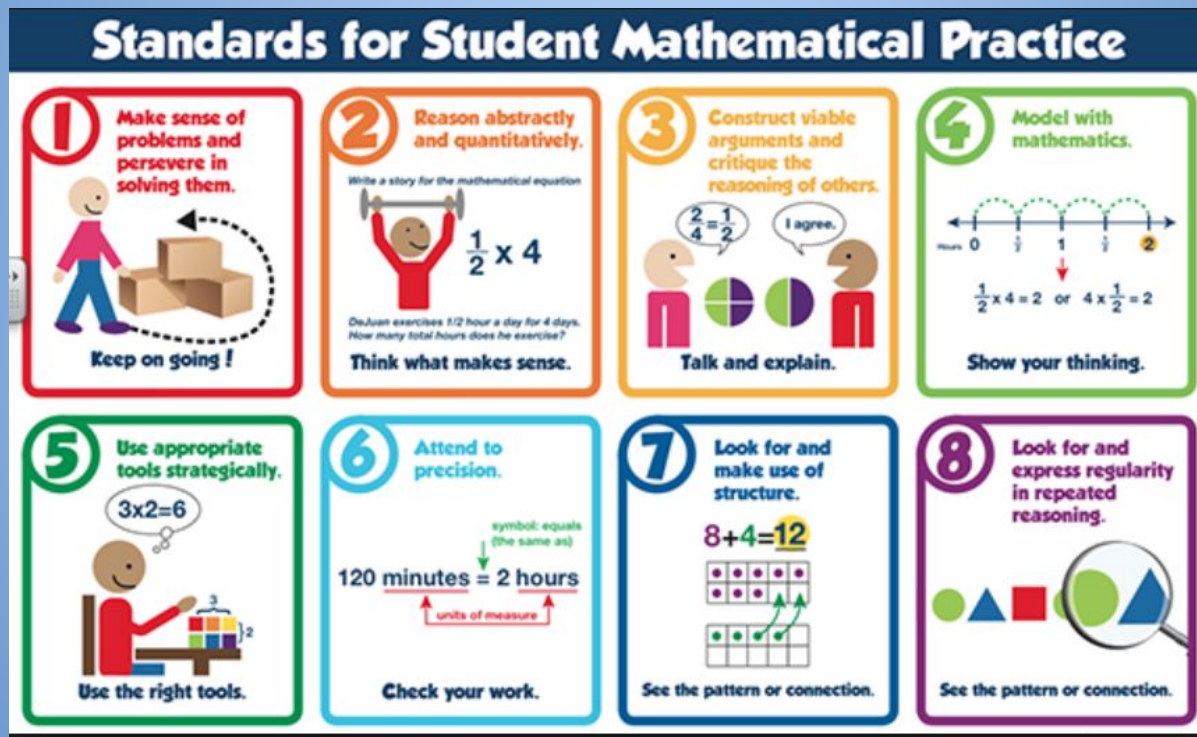
Concrete-Representation-Abstract

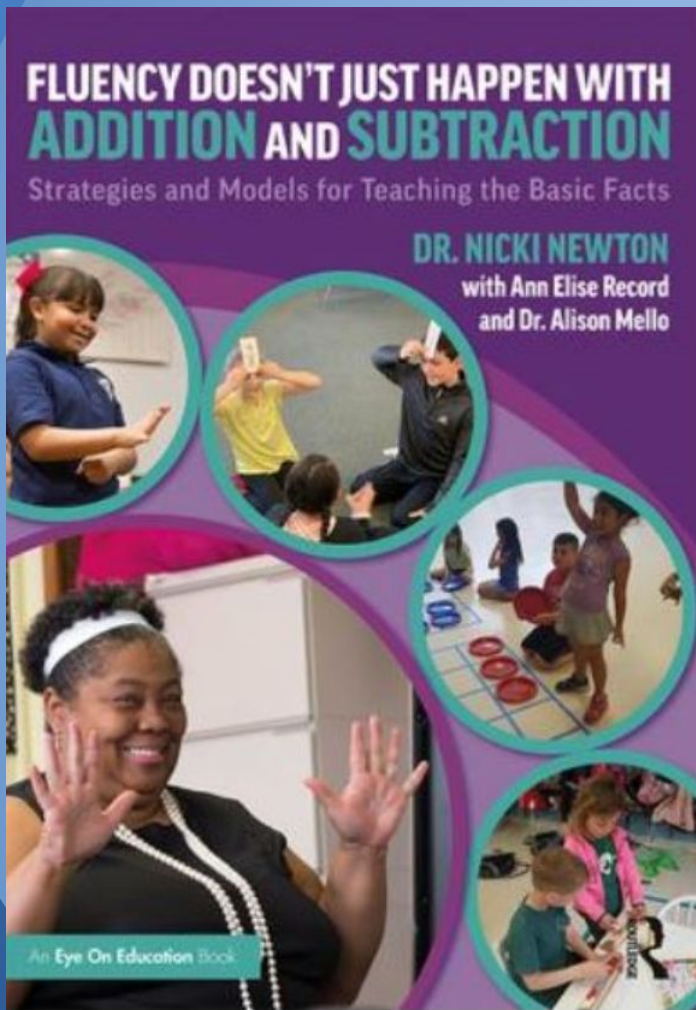
Do all 3 in the same activity, not separately



@BuildMathMinds

What does it look like to be a mathematician?





MATH WORKSTATIONS

Workstations to Explore Add 1		
Concrete	Pictorial	Abstract
Roll or Pull and Build a Add 1 on a Ten Frame	Draw on Ten Frame Model	Add 1 Clip Flashcards
Roll and Build a Add 1 on a Rekenrek	Draw on Rekenrek Model	Spin and Add 1 to 5 or 10
Roll and Build a Add 1 with the Cubes	Draw on Cube Template	Add 1 Board Game
Roll and Build a Add 1 in a Part-Part Whole Mat	Draw in a Part-Part Whole Mat	Add 1 War
Roll and Show a Add 1 in a Number Bond	Draw and Show in a Number Bond	Add 1 Tic-Tac-Toe
Add 1 with <u>Play-doh</u>	Add 1 Domino Sort & Record	Pull and Add 1
Spin and Build an Add 1 to 5	Add 1 Booklet	Add 1 Four in a Row

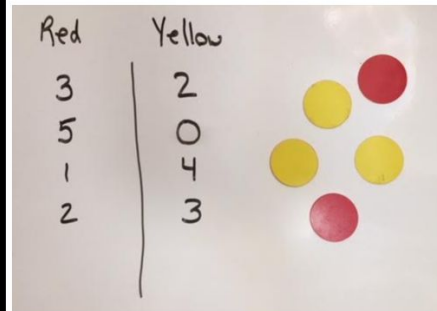
Add within 5 Concrete Activities

Make a 5 house with Cuisenaire Rods to explore the pairs of numbers that make 5. By systematically making the pairs, we can be assured we have them all.



Shake and Spill

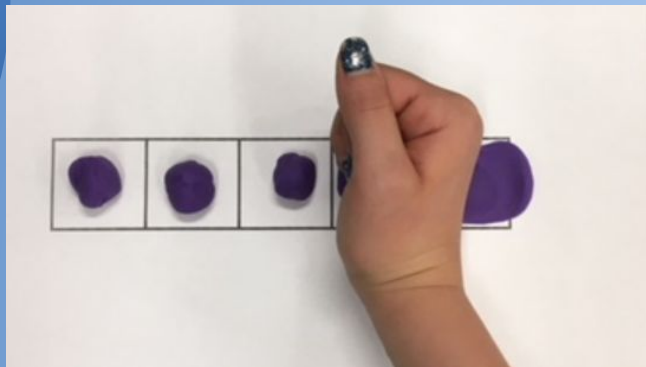
Put 5 2-sided counters in a cup... Shake and spill and record how many are red and how many are yellow. Repeat and see how many combinations there are. Students can record equations as well.



Addition Story Mat



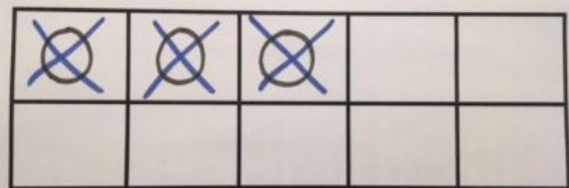
Directly Model



Roll, Build and Draw a Subtract a Number From Itself on a Ten Frame model



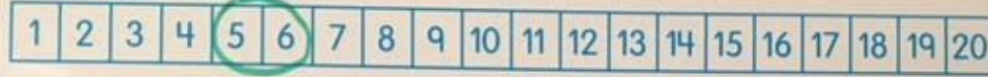
$$3 - 3 = 0$$



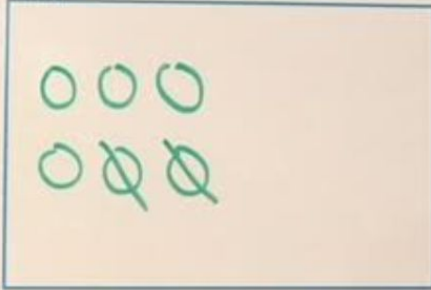
$$7 - 2 = \underline{\quad}$$



Number Path:



Draw:



Equation:

$$6 - 2 = ?$$



Ten-Frames:



Answer:

$$6 - 2 = 4$$

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Brainingcamp



Algebra Tiles



Base Ten Blocks



Clock



Color Tiles



Cuisenaire® Rods



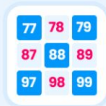
Fraction Circles



Fraction Tiles



Geoboard



Hundred Board



Linking Cubes



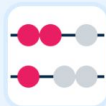
Number Lines



Pattern Blocks



Place Value Disks



Rekenreks

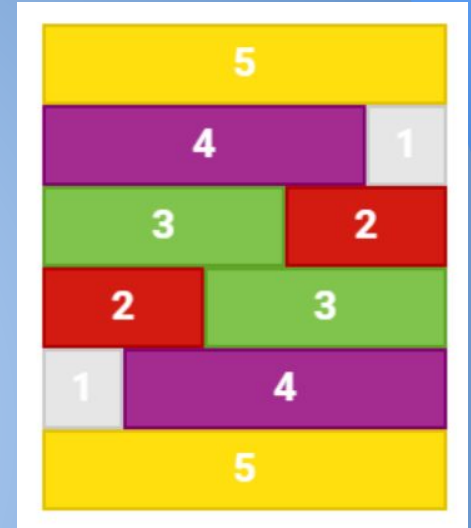
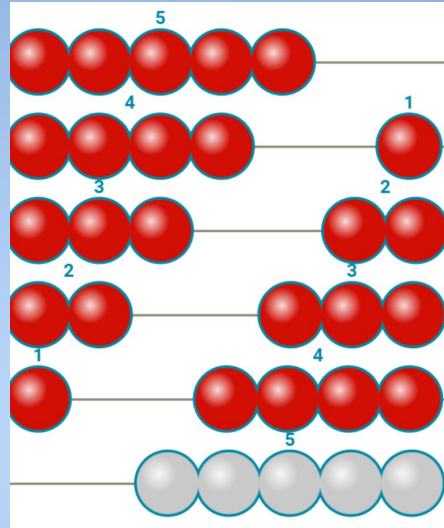
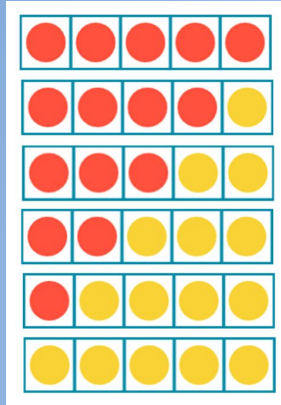
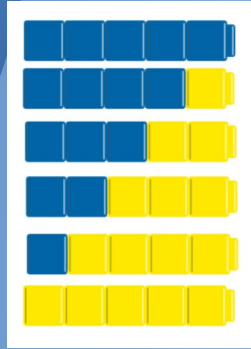


Two-Color Counters



XY Coordinate Board

Decomposing



$$5 + 0 = 5$$

$$4 + 1 = 5$$

$$3 + 2 = 5$$

$$2 + 3 = 5$$

$$1 + 4 = 5$$

$$0 + 5 = 5$$

$$5 = 5 + 0$$

$$5 = 4 + 1$$

$$5 = 3 + 2$$

$$5 = 2 + 3$$

$$5 = 1 + 4$$

$$5 = 0 + 5$$

Cuisenaire® Rods

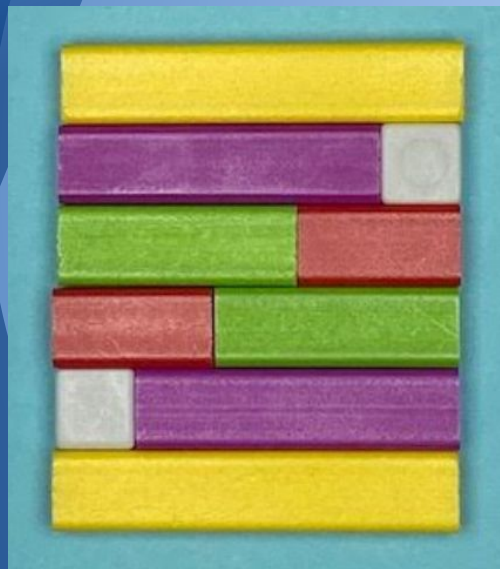


<u>Hot colors</u> yellow 5 orange 10		<u>Warm colors</u> red 2 purple 4 brown 8
<u>Others</u> white 1 black 7		<u>Cool colors</u> light green 3 dark green 6 blue 9

www.anneliserecord.com

The name Cuisenaire Rods and the color sequence of the rods are registered trademarks of hand2mind, inc.

Decomposing



$$5 + 0 = 5$$

$$4 + 1 = 5$$

$$3 + 2 = 5$$

$$2 + 3 = 5$$

$$1 + 4 = 5$$

$$0 + 5 = 5$$

$$5 = 5 + 0$$

$$5 = 4 + 1$$

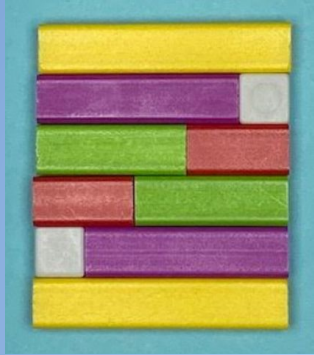
$$5 = 3 + 2$$

$$5 = 2 + 3$$

$$5 = 1 + 4$$

$$5 = 0 + 5$$

Decomposing all the numbers up to 10



My Just Right Number

Gracie has a yellow striped cat that loves to play with balls of yarn.
She has 7 yarn balls in the basket.
Roll the die to find out how many balls of yarn that the cat will play with today.

- Record what happens: $7 - 3$ makes 4 left in the basket.
- Prove it! $7 - 3 = 4$ because $4 + 3 = 7$



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Story Board Recording Sheet - ⑦

7 - 3 = 4 because 4 + 3 = 7

7 - ____ = ____ because ____ + ____ = 7

7 - ____ = ____ because ____ + ____ = 7

7 - ____ = ____ because ____ + ____ = 7

7 - ____ = ____ because ____ + ____ = 7

7 - ____ = ____ because ____ + ____ = 7

7 - ____ = ____ because ____ + ____ = 7

7 - ____ = ____ because ____ + ____ = 7

7 - ____ = ____ because ____ + ____ = 7

7 - ____ = ____ because ____ + ____ = 7

Shake and Spill: Level 2 Color a box to show each combination for 8

10									
9									
8									
7									
6									
5									
4									
3									
2									
1									
	0 on 8 off	1 on 7 off	2 on 6 off	3 on 5 off	4 on 4 off	5 on 3 off	6 on 2 off	7 on 1 off	8 on 0 off
	0 +8	1 +7	2 +6	3 +5	4 +4	5 +3	6 +2	7 +1	8 +0

Super for ALL ages!!

Padlet - Games



6	8	7	9	5	4	3	2	1
---	---	---	---	---	---	---	---	---

Shut the Box!

	2	3			6	7	8	9
--	---	---	--	--	---	---	---	---

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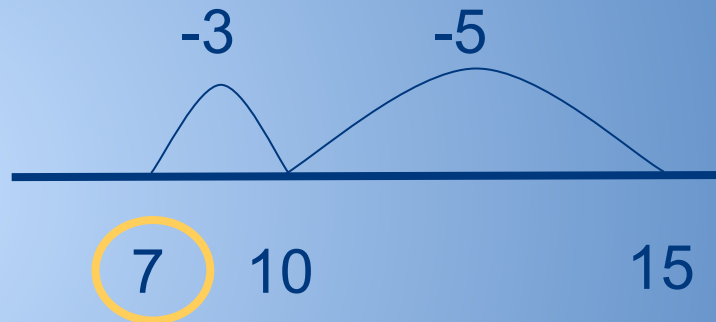
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Subtract Bridge 10

Take away thought process



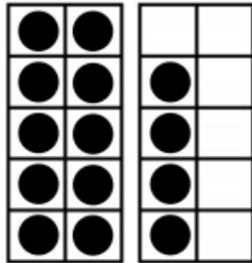
$$15 - 8$$



$$15 - 5 - 3 = 7$$

Math Flips

A



$$- 4 - 2$$

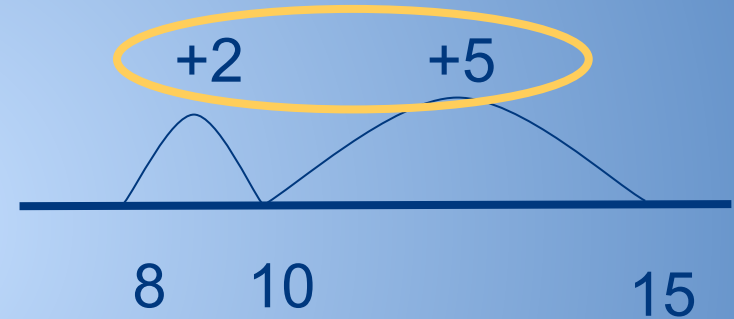
B

$$14 - 6$$

Subtract Bridge 10

Distance thought process

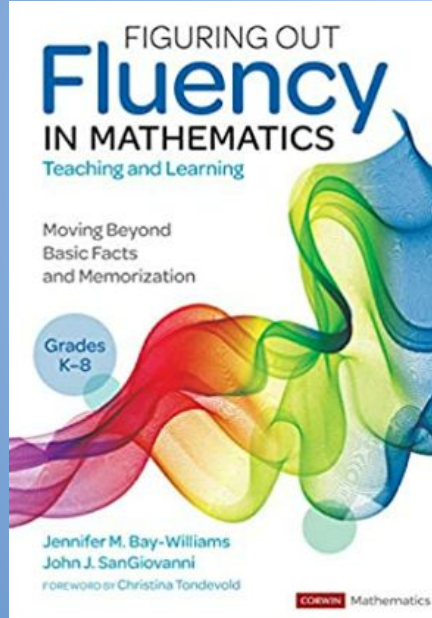
$$15 - 8$$



$$8 + 2 + 5 = 15$$



Students need to know how to **USE** a variety of strategies so that they can eventually **CHOOSE** to use them.



Jennifer Bay-Williams

Which expressions would the **half facts** strategy work well for and why?

$$10 - 4$$

$$7 - 2$$

$$12 - 11$$

$$12 - 6$$

$$16 - 8$$

$$15 - 8$$

$$5 - 1$$

$$18 - 9$$

Subtracting 2-digit and 1 digit

MQC62KPR

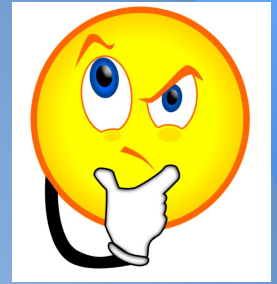


“Relational Rod Trays” on Amazon

Math is not a spectator sport!
Dr Nicki Newton

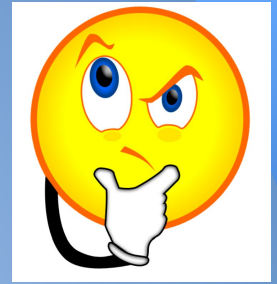


How many strategies can you think of
to solve this?



$$52 - 38$$

Concrete Manipulatives



What is the thinking while using them?

2-Digit Subtraction

YYU2EFKK

brainiaccamp

1 2 3 4 5 6 7 8 9 10 11

1

2

3

4

5

6

7

8

9

10

11

55

Dan saved \$ 55 to buy a video game. If the game he wants costs \$ 31, how much money will he have left?

10 10 10 10 10 5

Which expressions would the **find the distance** strategy work well for and why?

$$71 - 68$$

$$96 - 23$$

$$118 - 19$$

$$45 - 11$$

$$78 - 68$$

$$102 - 98$$

$$90 - 12$$

$$34 - 27$$

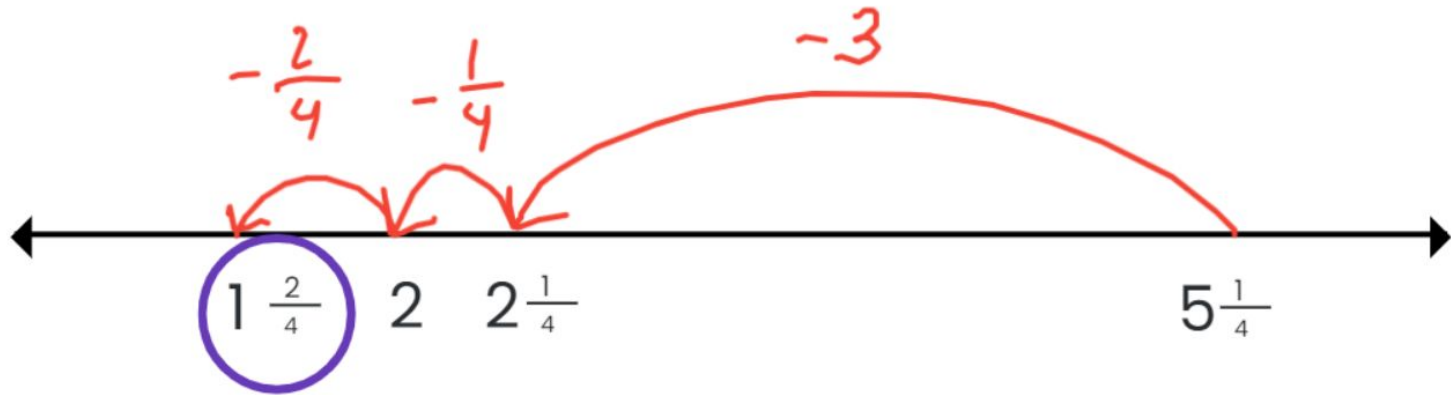
Flexible Subtraction Strategies

M8VBX9GY

$$5\frac{1}{4} - 3\frac{3}{4}$$



$$5\frac{1}{4} - 3\frac{3}{4}$$



decomposing

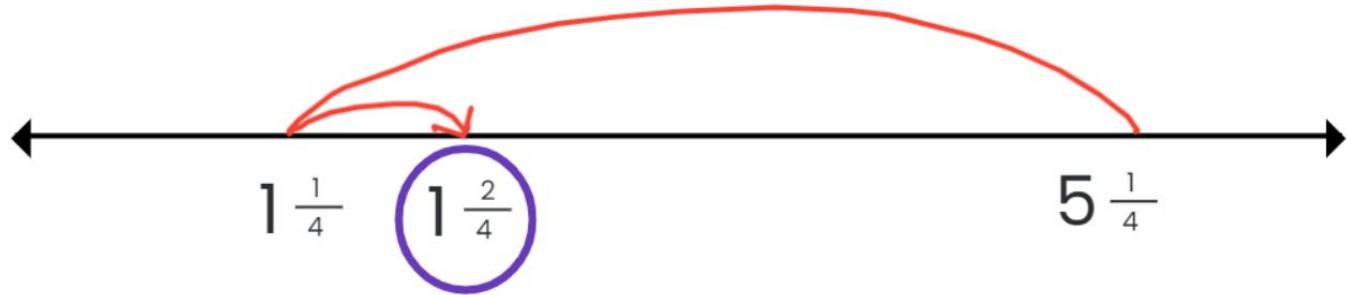
compensating

find the distance

constant difference

$$5\frac{1}{4} - 3\frac{3}{4}$$

-4



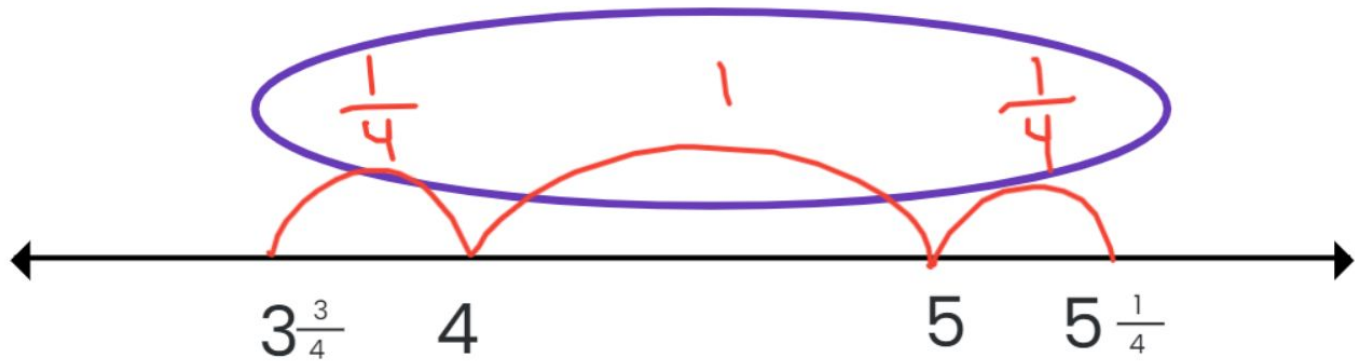
decomposing

compensating

find the distance

constant difference

$$5\frac{1}{4} - 3\frac{3}{4}$$



decomposing

compensating

find the distance

constant difference

$$5\frac{1}{4} - 3\frac{3}{4} = 5\frac{2}{4} - 4$$



decomposing

compensating

find the distance

constant difference

Daily Routines that Develop Fluency

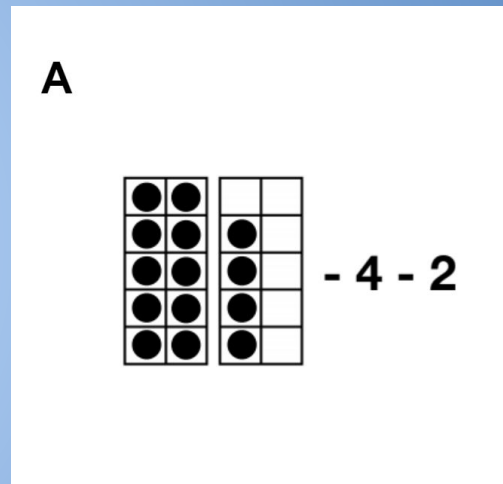


How old are you?

Can you show me that
in another way?



Subitizing



Math Flips

How many more to.....

100 if I have 63?

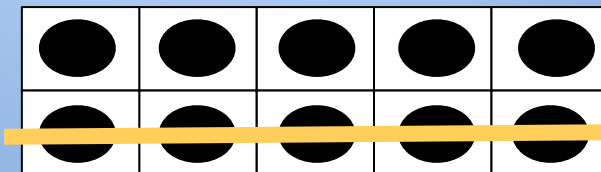
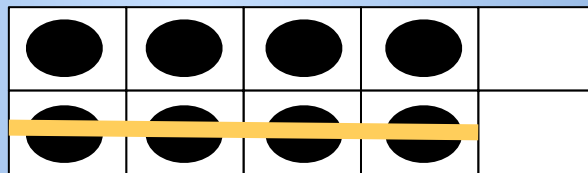
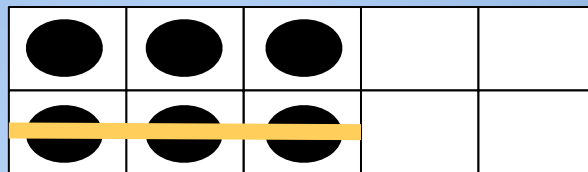
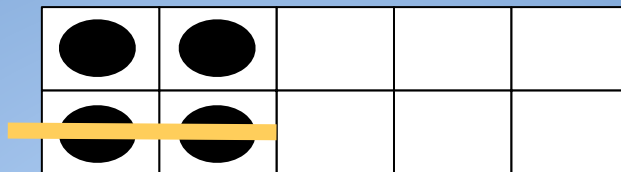
1,000 if I have 582?

2 if I have $\frac{3}{4}$?

1 if I have .48?

3 if I have 1.8?

Number Strings



Number Strings

Distance

$$102 - 98$$

$$2465 - 1398$$

$$4 - 2.7$$

$$4 \frac{1}{5} - 2 \frac{4}{5}$$

$$6 - (-2)$$

Salute!



Card games (on padlet)

- War - largest value (by how much); largest sum; largest difference; 2-digits
- Double and Halving
- How many more to 10, 11...20



Worked examples

The screenshot shows the Brainiac Camp website interface. At the top, the logo "brainiaccamp" is on the left, and navigation links "Send Feedback" and "Share" are on the right. Below the logo is a vertical sidebar with numbered buttons from 1 to 11. Button 11 is highlighted in pink and has a small right-pointing arrow next to it. The main content area displays a math problem in blue text: "Jenny brushed 2 more horses than Amy. If Jenny brushed 6 horses, how many did Amy brush?". Below the text is a large, empty, light blue rounded rectangle for the user's answer.

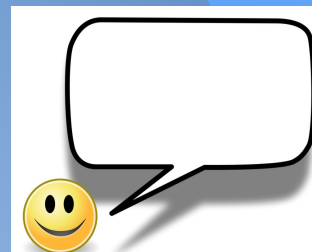
brainiaccamp

Send Feedback Share

1 2 3 4 5 6 7 8 9 10 11 →

Jenny brushed 2 more horses than Amy. If Jenny brushed 6 horses, how many did Amy brush?

Multi-Digit Subtraction



SUBTRACTION TO GET THE SMALLEST DIFFERENCE

Directions: Using the digits 1 to 9, at most one time each, fill the boxes below to create the smallest possible difference.

$$\square\square\square - \square\square\square = ?$$

Hint



Answer



Families



<https://www.tinyurl.com/RecordFamilies>

Ann Elise Record · 20h

Parent Math Resources

There is nothing elementary about teaching elementary math!

Ann Elise Videos

Welcome!

Parent Welcome Video
by Ann Elise Record Consulting, LLC
YouTube

Math Journeys - the WHYS?

Math Journeys
by Ann Elise Record Consulting, LLC
YouTube

The Heart of Addition

Online parent communities

Adding Parents to the Equation

Dr. Hilary Kreisburg Dumovic and Dr. Matthew Beyranevand

the EQUATION

Adding Parents to the Equation
In this group, we aim to help parents better understand math.
facebook

Math is Figureoutable Parent Group (search within Facebook)

by Pam Harris

Sites with math prompts for home discussions!

Math Before Bed

Math Before Bed
Nighttime or Anytime Numeracy
math before bed

Bedtime Math

Home: Helping little kids love math!
bedtime.math

Talking Math with Your Kids

Podcast interviews with Ann Elise

Podcast Math Before Breakfast - Ann Elise Interview is Episode 40

Math Before Breakfast
by Jay Proffitt
math before breakfast

Ann Elise's interview on Christina Tondevold's Build Math Minds Podcast on Math Running Records

Episode 4: Inspiration from Ann Elise Record

Videos made for parents

Counting Collections!!

Counting Collections at Home Final.mp4
by Berkeley Everett
google drive

Adding Parents to the Equation Video 1

Adding Parents to the Equation

The Top 3 Facts Every Parent Needs to Know
by Math With Matthew
YouTube

Mike Flynn from Mt Holyoke

Math for Ann Elise

Math Facts

Math Facts PDF document
padlet drive

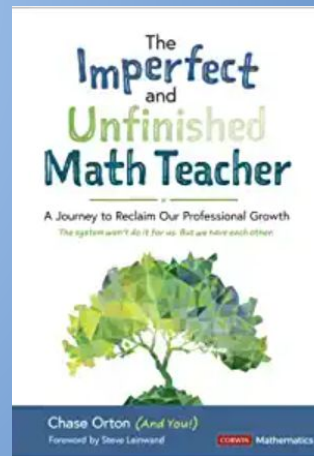
Addition Version

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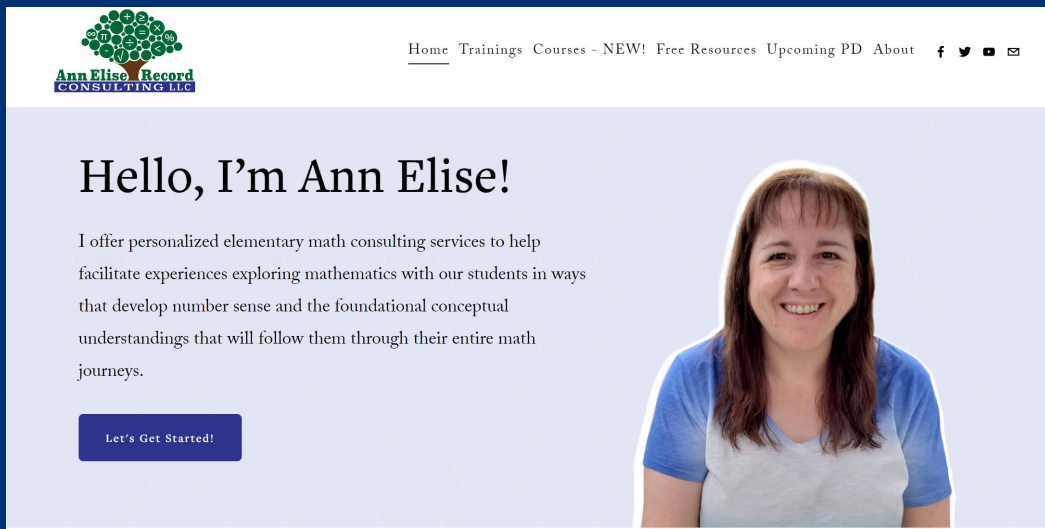
We are not just teaching students math content, we are helping them author their math stories.



Chase Orton



Thank you for all you do for students!



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