

Math for All: Supporting Your Child with Disabilities in Math

Rachel Tabron, Math Accessibility Specialist
Alt+Shift



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Math for All
Supporting Your Child with Disabilities in Math



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Alt+Shift is an *Individuals with Disabilities Education Act (IDEA)* Grant Funded Initiative through the Michigan Department of Education, Office of Special Education



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Accessibility Commitments

We take the following steps to ensure this presentation is accessible:

- Use Grackle Slides and/or Microsoft Accessibility Checker to perform an automated accessibility check.
- Ensure a clear reading order for screen reader users.
- Provide access to the deck for a personalized experience.
- Utilize closed captioning.

We welcome any feedback for improving the experience.

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Please Note

In this webinar, Alt+Shift will provide information and resources regarding best practices.

Student specific solutions, including the use of specific tools, are determined by your learner's IEP team. For assistance navigating IEP meetings, contact Michigan Alliance for Families. For assistance with disagreement resolution or complex meetings, contact [Special Education Mediation Services](https://www.mikids1st.org/) (<https://www.mikids1st.org/>).

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Nice to Meet You!

Rachel Tabron

- Math Accessibility Specialist with Alt+Shift
- Special Education Teacher for 7 years
- Special Education Supervisor for 8 years
- Mom of two boys, both with IEPs
- Contact information:
Rachel.Tabron@AltShift.Education




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Workshop Description

Supporting your child in math can feel overwhelming for many parents of students with disabilities. This webinar aims to provide families with an understanding of math practices for students with disabilities and offer practical strategies they can use to support their child's mathematical learning.

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Learning Objectives

Participants will:

- learn about evidence-informed practices that make math accessible to all students
- discover strategies and techniques to support their child's mathematical learning
- increase confidence in their ability to support and advocate for their child's mathematical learning

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"Math Person" Myth

Hello
my name is

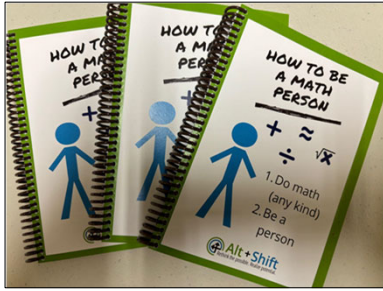
Hello
my name is

Math Person

Not a Math Person

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"Math Person" Truth



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The Brain



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Analog vs. Digital



Analog is how full something is. It is based in quantity and amount.

Digital refers to the numerals or digits we assign to describe that quantity or fullness.

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Analog Clock at 8 Minutes



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Digital Clock at 8 Minutes



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Analog Brain

- Humans have analog brains
- Our memory is not designed for digits
- Our memory is designed for stories and impressions



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Fuel Level




.70

(Dehaene, 1997)

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Pilot Example



4.125	3.67	8.00
00.48	7.185	2.895
36,482	1400	9
32	1.75	

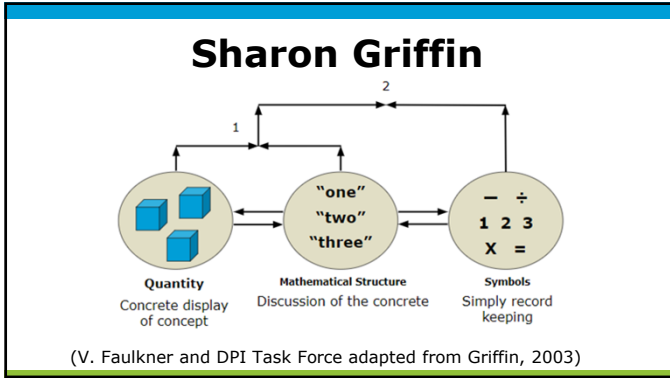
(Dehaene, 1997)

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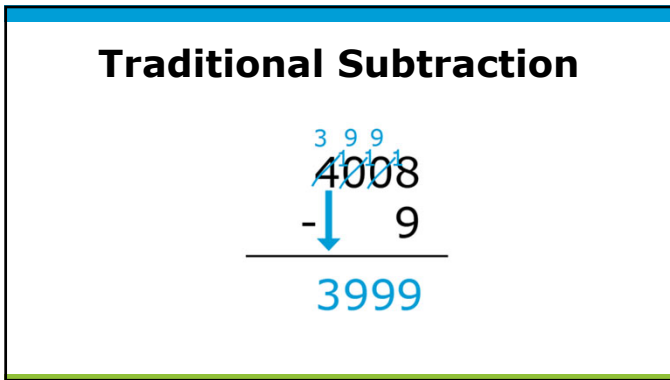
How Does This Impact Learning?

Students need to understand math from an analog, or physical, perspective in order to build understanding.

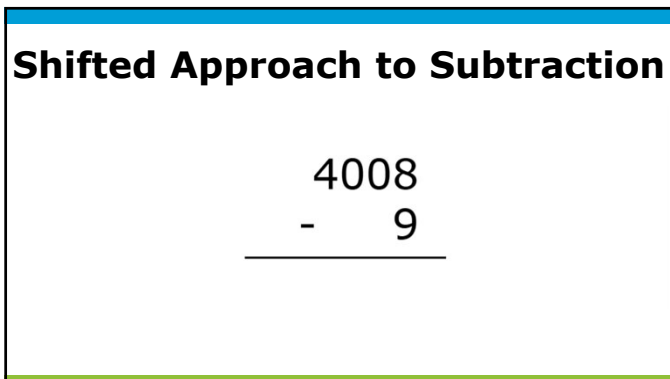
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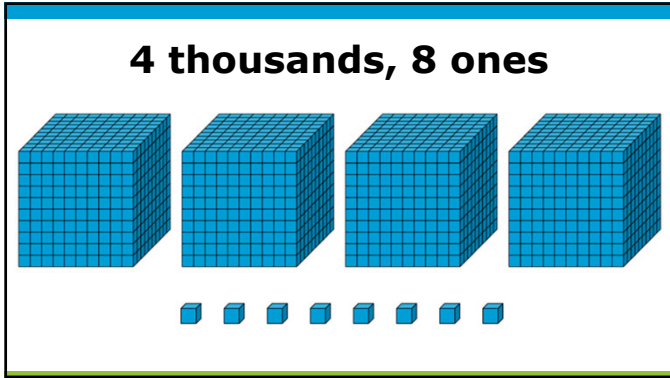
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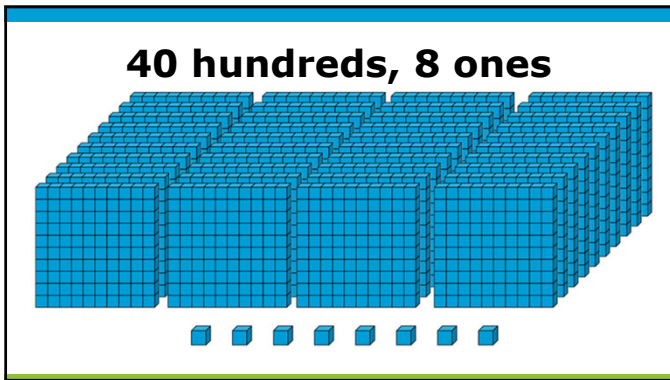
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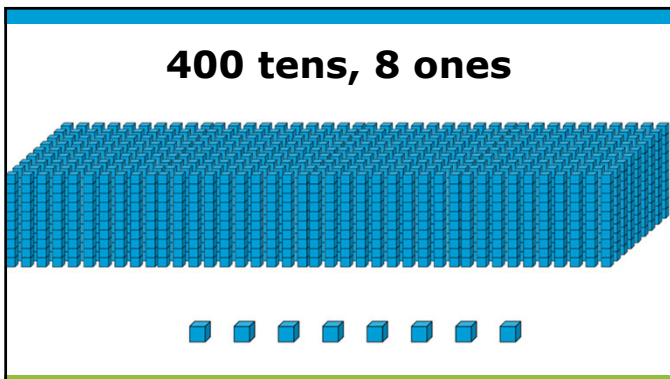
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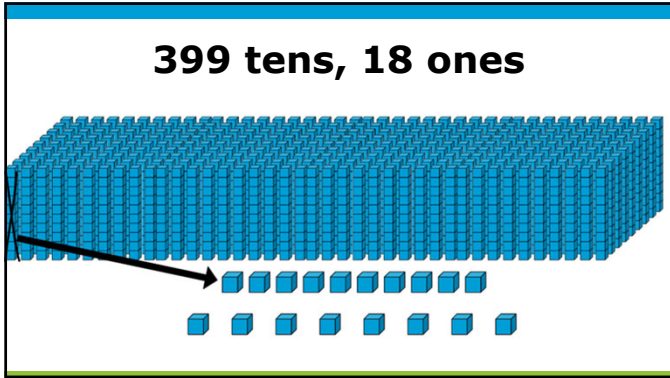
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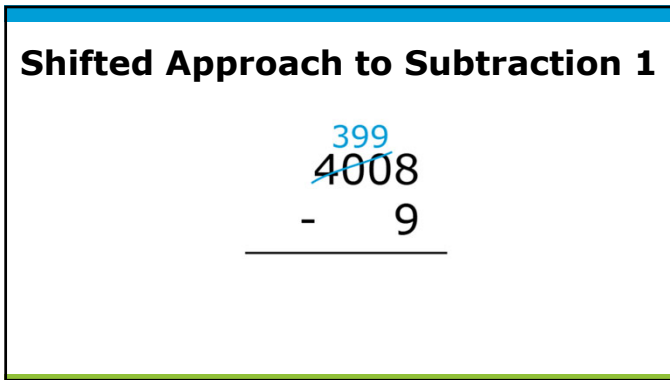
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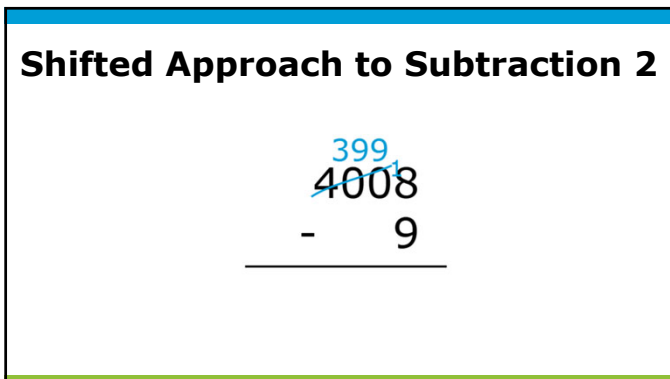
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Shifted Approach to Subtraction 3

$$\begin{array}{r}
 399 \\
 4008 \\
 - \quad 9 \\
 \hline
 3999
 \end{array}$$

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How is this Different?

Shifted approach focuses on:

- reasoning
- sense making
- problem-solving

Traditional approach focuses on:

- speed
- following step-by-step procedures
- finding the answer to a problem

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Access to a Supportive Adult

- Allow for ample processing time (be quiet)
- Ask a question to support their understanding
 - What do you already know?
 - Could you make a drawing to help you think about the problem?
 - How do you know?



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Provide Choice

Provide structured choices to increase child's sense of control

- Determine what is non-negotiable
- Determine what is negotiable
 - Offer choices on negotiable



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Negotiable Examples

Would you like to:

- practice your math facts on the couch or at the table?
- use flashcards or play a math fact game on your computer?
- quiz me first, or would you like me to quiz you first?
- type your answers or write them?
- write on lined paper or graph paper?
- write with a pencil or a marker?

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Use Existing Resources

- Online textbook
- Google Classroom resources
- Student notes
- Worked examples



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Use Generally Available Resources

- Search the skill (multiply double-digit numbers)
- Use information from the assignment/lesson in your search "Go Math" or "Bridges Grade 5 Unit 2"
- Keep looking until you find a video that explains it in a way that make sense



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Where to Learn More

- Online Modules
- Statewide Training



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Online Modules

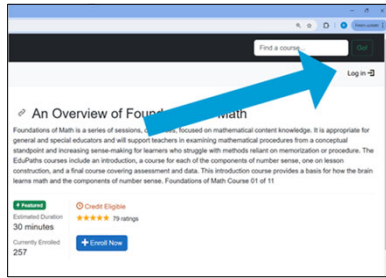
info.altshift.education/OnlineModules



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Step 1

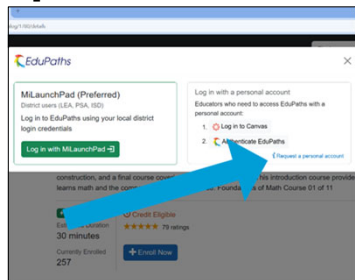
- Click "Log in" in the upper right-hand corner



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Step 2

- Request a personal account
- Enter relevant information



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Statewide Training

Dates: January 9, 10 & February 12, 13

Location: Clinton County RESA

Target Audience: PK-12th grade educators (or those working from birth through transition) who are involved in math instruction.

- general & special education classroom teachers
- paraprofessionals
- ancillary staff
- administrators
- families

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For more information visit
www.michiganallianceforfamilies.org

Call 800-552-4821
 En Español 313-217-1060
 للتلفون العربيه 248-963-0607
info@michiganallianceforfamilies.org

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Michigan Alliance for Families

Michigan Alliance for Families is an IDEA Grant Funded Initiative of the Michigan Department of Education, Office of Special Education, and Michigan's Federal Parent-Training and Information Center (PTIC) funded by U.S. Department of Education, Office of Special Education Programs (OSEP).

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