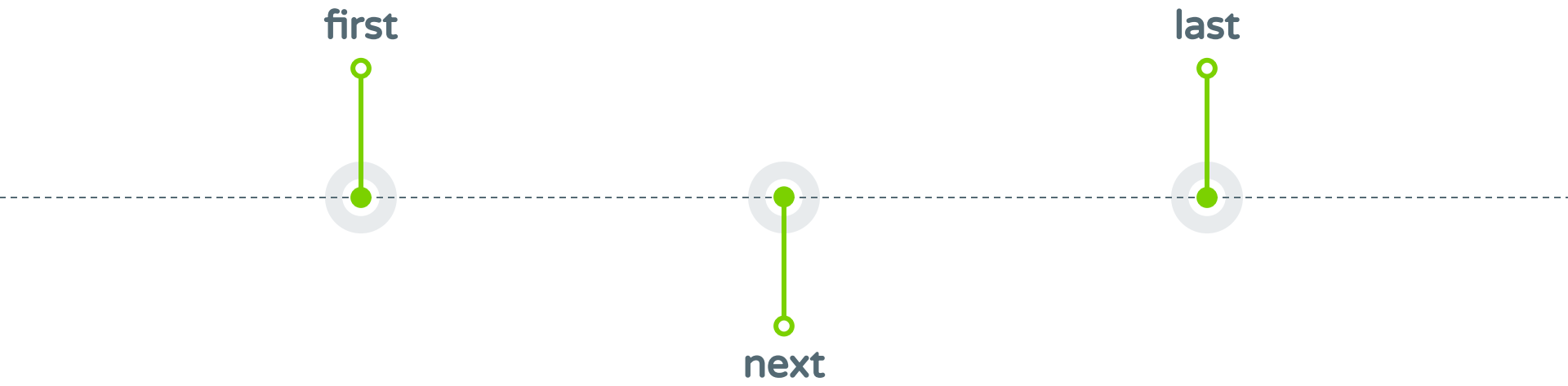
Math Advisory Committee Recommendations

Our process



Overview

Goals:

- Participate in a comprehensive math program review for Penn-Harris-Madison.
- Establish a focused, rigorous, coherent instructional program that will increase student achievement through a systematic district-wide approach.
- After investigation and data analysis, determine if additional (or different) math resources are needed for our students.

Plan of Work:

- Convene committee; review the scope of the work
- Program review (data analysis, teacher perception review)
- Collectively review recent research on best practices and program evaluation
- As needed, review (through both a horizontal and vertical trace) programs that may benefit our students

Comparisons and Predictions

In 1970, Fortune 500 most valued skills:

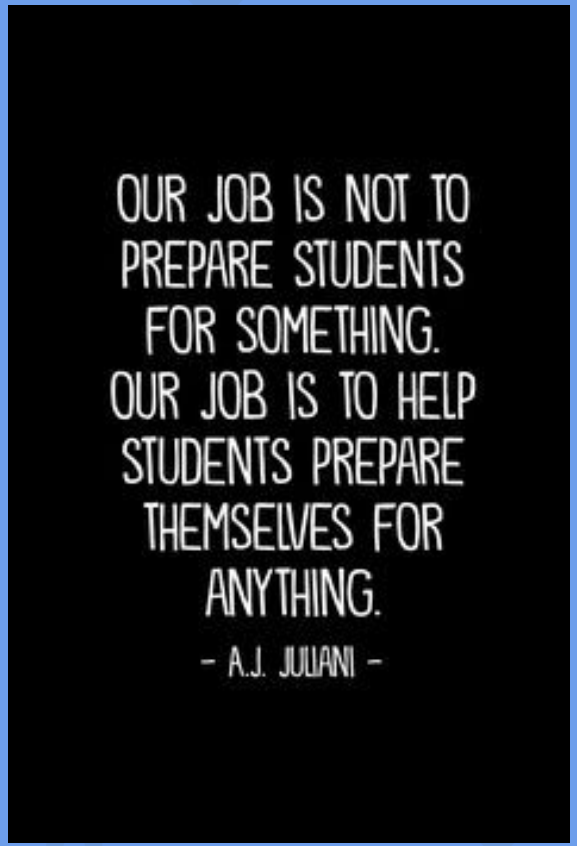
1. Writing
2. Computational Skills
3. Reading Skills
4. Oral Communications
5. Listening Skills
6. Personal/Career Development
7. Creative Thinking
8. Leadership
9. Teamwork
10. Organizational Effectiveness

In 2019:

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Judgment/Decision Making
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility

Jobs that might not exist in the future:

1. Cashier
2. Newspaper Delivery
3. Travel Agents
4. Taxi Dispatch
5. Taxi Drivers


OUR JOB IS NOT TO
PREPARE STUDENTS
FOR SOMETHING.
OUR JOB IS TO HELP
STUDENTS PREPARE
THEMSELVES FOR
ANYTHING.
- A.J. JULIANI -

What IS good math???

NCTM

The six Principles address overarching themes:

- **Equity.** Excellence in mathematics education requires equity—high expectations and strong support for all students.
- **Curriculum.** A curriculum is more than a collection of activities: it must be coherent, focused on important mathematics, and well articulated across the grades
- **Teaching.** Effective mathematics teaching requires understanding what students know and need to learn and then challenging and supporting them to learn it well.
- **Learning**. Students must learn mathematics with understanding, actively building new knowledge from experience and prior knowledge.
- **Assessment.** Assessment should support the learning of important mathematics and furnish useful information to both teachers and students.
- **Technology.** Technology is essential in teaching and learning mathematics; it influences the mathematics that is taught and enhances students' learning.

Standards for Student Mathematical Practice

1 Make sense of problems and persevere in solving them.

Keep on going !

2 Reason abstractly and quantitatively.

Write a story for the mathematical equation

$\frac{1}{2} \times 4$

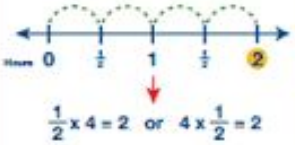
DeJuan exercises 1/2 hour a day for 4 days. How many total hours does he exercise?

Think what makes sense.

3 Construct viable arguments and critique the reasoning of others.

Talk and explain.

4 Model with mathematics.



Show your thinking.

5 Use appropriate tools strategically.

Use the right tools.

6 Attend to precision.

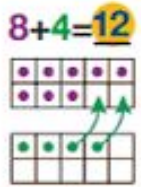
symbol: equals (the same as)

120 minutes = 2 hours

units of measure

Check your work.

7 Look for and make use of structure.



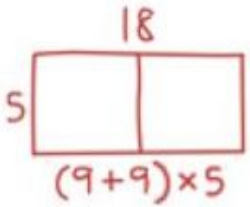
See the pattern or connection.

8 Look for and express regularity in repeated reasoning.

See the pattern or connection.

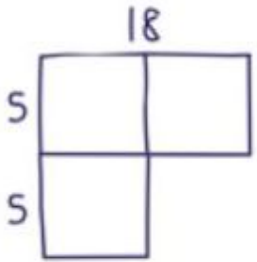
18 x 5

Neil



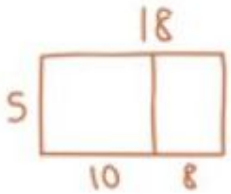
45+45=90

Ricardo



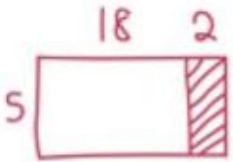
18×5=9×10

Sammi



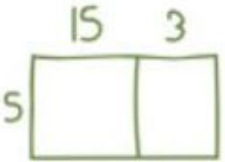
(10×5)+(8×5)
50+40=90

Jaime



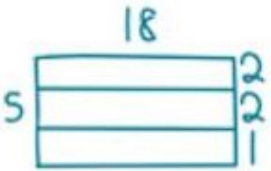
20×5=100
2×5=10
100−10=90

Ariane



15×5=75
3×5=15
75+15=90

Bryan



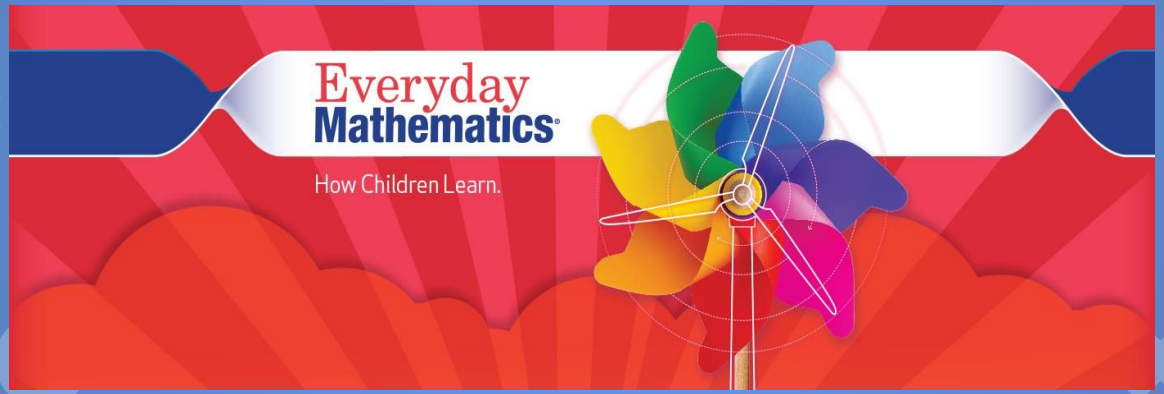
(18×2)+(18×2)+18
36+36+18=90

Is math anxiety real or perceived?

MISSION CRITICAL:

A strong math program focused on critical thinking and reasoning.

Elementary Recommendation



More Info About EM

Secondary Recommendations

CARNEGIE LEARNING

LONG + LIVE + MATH

More Info About CL

More Info About AM

Special Thanks To Our Teacher Representatives

Jenni McCarthy
Anna King
Jodi McGann
Franca Peluso
Mary Dansky
Amber Davis
Peggy Orosz
Emily Breeden
Carlye Ponsler
Ann Lira
Stephanie Betzer
Kendra Suddarth

Lisa Russell
Cassie Scarsella
Lindsay Schirripa
Madelyn Beers
Katie Carroll
Amy Fadorsen
Dave Metcalf
Michelle Crawford
Coleen Manspeaker
Nancy Ladson
Karl Black
Tony Krupa

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Adrianna Eutsey
Ben Kase
Dawn Boulac
Denise White
Kelli Rogers
Ree Johnson
Anne Marie Reininga
Jessie Kinney