

***SYOSSET MATHEMATICS  
AND BUSINESS K-12***

March 13, 2023

Syosset Central School District  
Board of Education Presentation

# ***MATHEMATICAL LITERACY THEN AND NOW...***

1.0	2.0
“Plug and chug”	<i>Conceptual math</i>
Workbook is the curriculum	Students learn using strategically selected resources
Mathematics learned in block period	Mathematics and business as a literacy integrated anywhere

**1**

**Make sense of problems and persevere in solving them.**

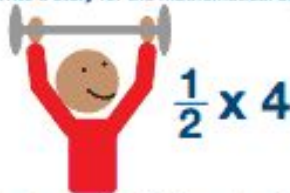


**Keep on going!**

**2**

**Reason abstractly and quantitatively.**

*Write a story for the mathematical equation*

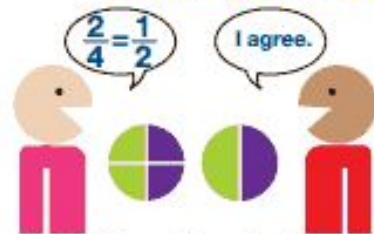


*DeJuan exercises 1/2 hour a day for 4 days. How many total hours does he exercise?*

**Think what makes sense.**

**3**

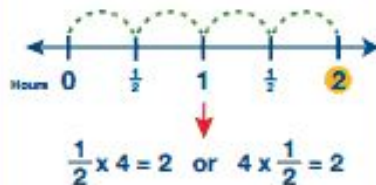
**Construct viable arguments and critique the reasoning of others.**



**Talk and explain.**

**4**

**Model with mathematics.**



**Show your thinking.**

**5**

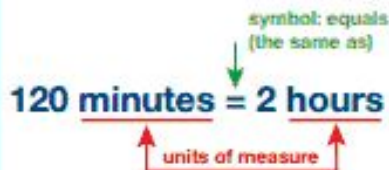
**Use appropriate tools strategically.**



**Use the right tools.**

**6**

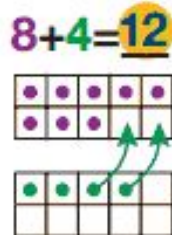
**Attend to precision.**



**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.**

# ***OVERARCHING PRACTICE***

- × Only with deep conceptual knowledge can students synthesize, analyze, and reason.

**3** Construct viable arguments and critique the reasoning of others.



Talk and explain.

4

# ***ELEMENTARY MATH***

From the workbook to the  
workshop...

## ***FROM COMMON CORE TO NEXT GENERATION...***

- × Go Math was our big shift
- × New norm: math outside the workbook
  - × Workshop model
  - × Flexible reasoning
  - × Applying concepts
  - × Habits of mind across disciplines

# WORKBOOK TO WORKSHOP





***MIDDLE SCHOOL MATH  
AND BUSINESS***

Smoothing transitions

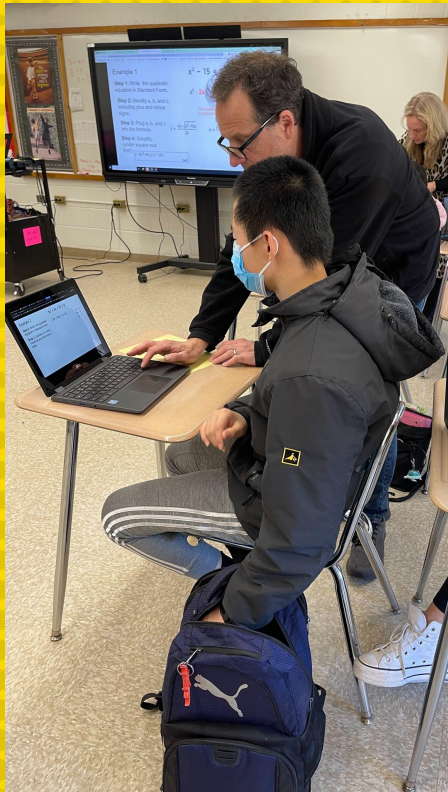


# TRANSITION SMOOTHING



- × 5th into 6th grade curriculum and resource development
- × 8th into 9th grade curriculum and placement guidance

# MOVING THE MIDDLE





***HIGH SCHOOL MATH  
AND BUSINESS***

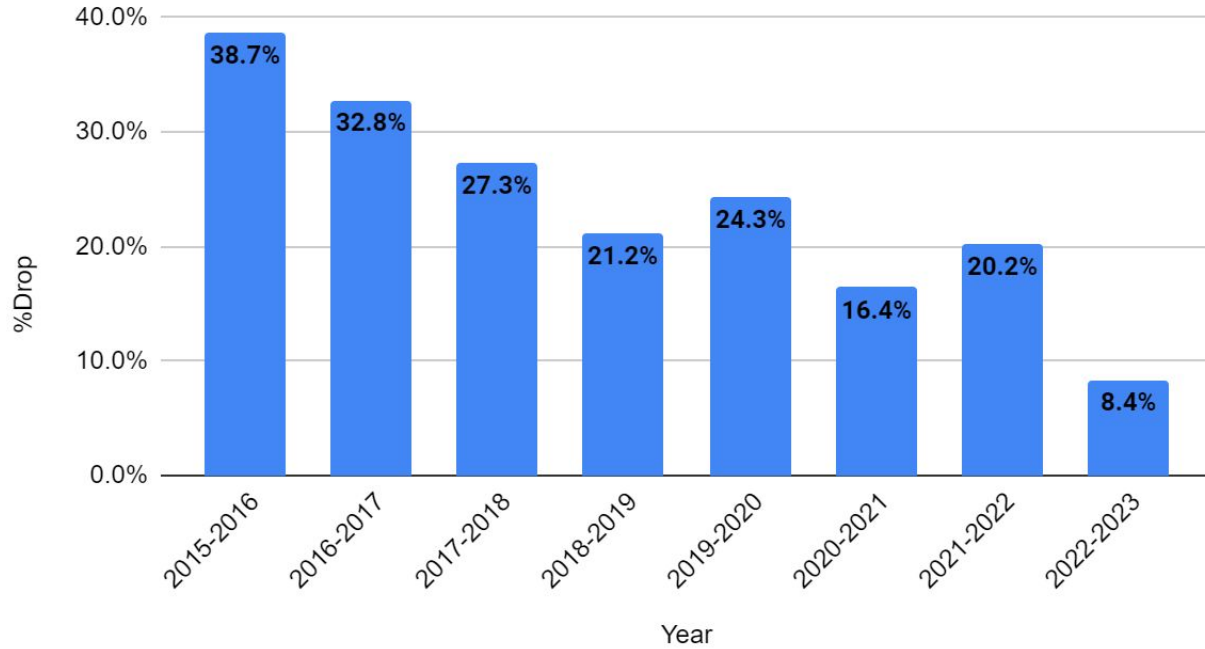
Mathematical literacy as a vehicle  
to producing insight

# TRANSITION SMOOTHING

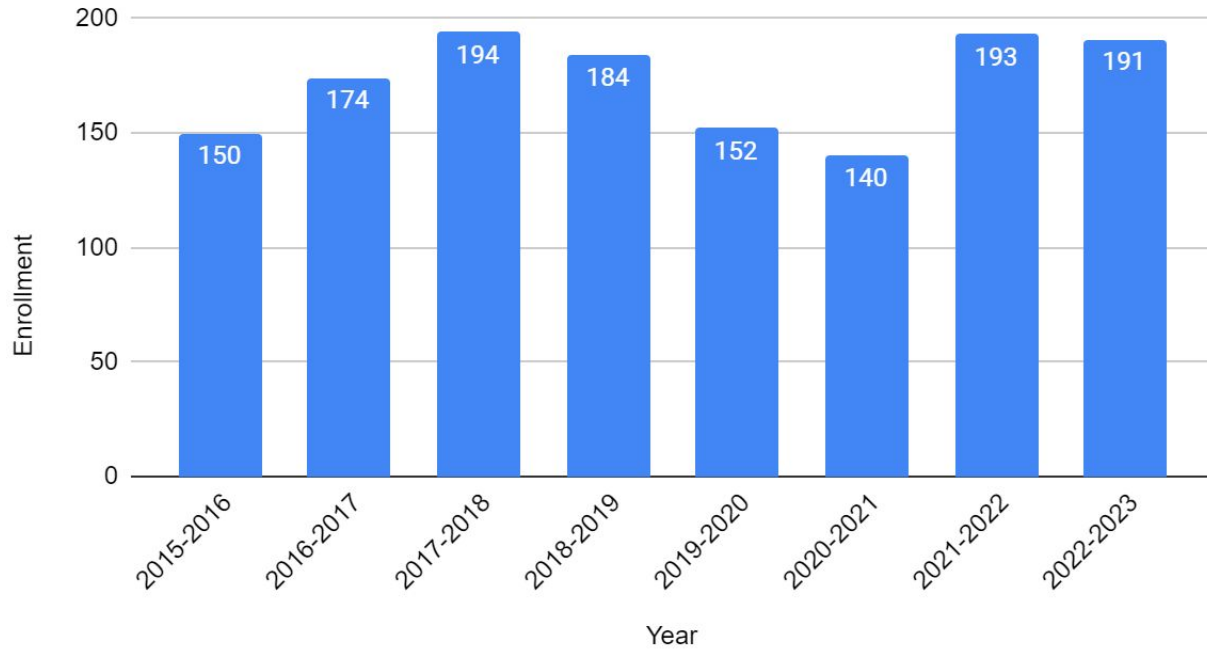


- × Student retention while maintaining participation
- × Continued development of integrated coursework where students develop insights

## Geometry Honors Drop Rate



## Geometry Honors Enrollment



# CROSSCUTTING CONCEPTS

Students uncovering and debating the intersection of math, business, and history!



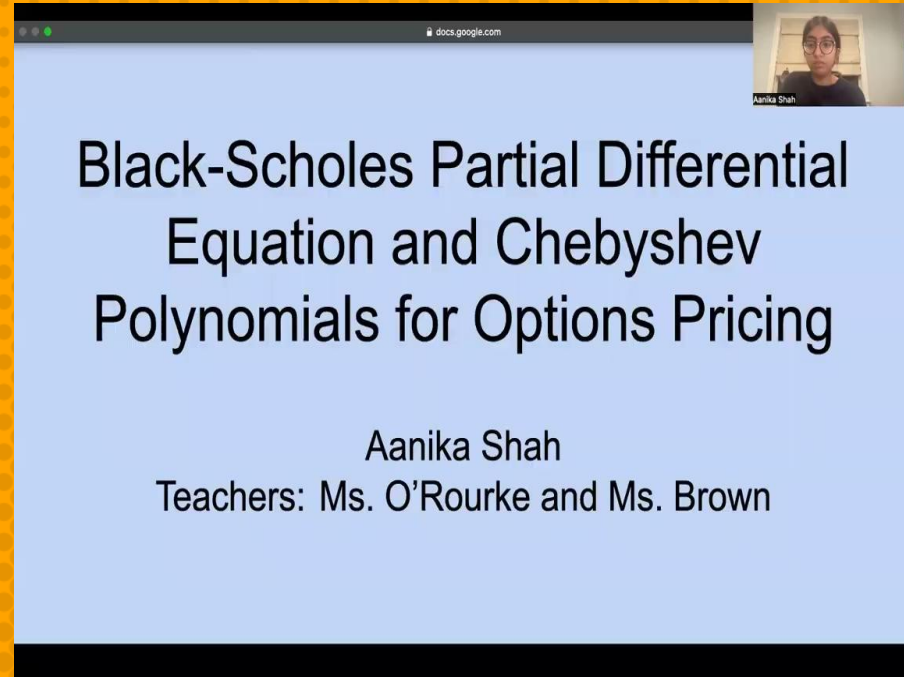
# SYOSSET DECA





# CROSSCUTTING RESEARCH

The insights our students can produce when conceptual learning is the norm!

A screenshot of a Google Docs presentation slide. The slide has a light blue background and a black border at the bottom. In the top right corner, there is a small video feed of a person with glasses, labeled 'Aanika Shah'. The main text on the slide is centered and reads: 'Black-Scholes Partial Differential Equation and Chebyshev Polynomials for Options Pricing'. Below this, it says 'Aanika Shah' and 'Teachers: Ms. O'Rourke and Ms. Brown'. The browser address bar at the top shows 'docs.google.com'.

docs.google.com

Aanika Shah

## Black-Scholes Partial Differential Equation and Chebyshev Polynomials for Options Pricing

Aanika Shah  
Teachers: Ms. O'Rourke and Ms. Brown

# ***WHAT'S NEXT!!??***

Elementary

Math 3.0

Middle

Next

Generation  
aligned regents  
exams

High School

AP Precalculus

***THANK***

***YOU!***

