

Detracking Mathematics

A Presentation from the SHUSD Math Alignment Committee (MAC)

March 10, 2022

Madison Butts, Debra Carnes, Michelle Parriott

Current SHUSD Math Acceleration

- ✓ Currently, SHUSD uses tracking to accelerate math students.
- ✓ The term tracking refers to a method used by many schools to group students according to their perceived ability, IQ, or achievement levels.
- ✓ Typically, students designated as “advanced” are accelerated after 5th grade into a separate math class where they learn 7th grade math instead of 6th grade math.
- ✓ Students are offered opportunities to advance again in 6th and 7th grade.
- ✓ Acceleration is achieved by having students skip a grade of middle school math.
- ✓ By accelerating in middle school, students enter high school at the Integrated Math 2 level (which is an on-level course for sophomores).
- ✓ The purpose of the accelerated path is to help students take Calculus by their senior year.

Current Math Acceleration Pathway

RLS: 7th grade math → 8th grade math → Integrated Math 1

SHHS: Integrated Math 2 → Integrated Math 3 → Precalculus → Calculus

Acceleration Concerns

Identified gaps in student content mastery.

Negative social dynamics are created for students (accelerated students feel the pressure to be “smarter” than their peers and on-level students feel like they aren’t good at math since they weren’t put into the accelerated pathway).

Some students in the accelerated path don’t matriculate to Calculus either due to burnout in higher level math courses or understanding that their future does not require Calculus.

By accelerating in the 6th grade, we are asking parents and students to declare a college major by assuming the student needs to take Calculus before graduation.

6th Grade Content Missed by Acceleration

6 th grade content missed	When students see it again
Exponents	8th grade
Dividing Fractions	7th grade
Decimal Operations	7 th and 8 th grade
Statistics Mean/Median/Mode 5 Number Summary Box Plots Stem & Leaf	Integrated 1
One Step Equations	N/A (reviewed in later courses)

7th Grade Content Missed by Acceleration

7 th grade content missed	When students see it again
Integer & Rational Number Operations	8th Grade
Two-Step Equations	N/A (reviewed in later courses)
Circles radius/circumference/diameter/ area/pi	Pre-Calculus
Constant of Proportionality	8th grade
Statistics Probability	HS Statistics



Detracking in SHUSD removes the ability for students to accelerate in math until after their sophomore year of high school.

By delaying acceleration, students take all levels of middle school math providing them a solid, rigorous math foundation.

Students can accelerate after their sophomore year of high school, if they choose to, when they have a better idea of whether they need or want to take Calculus for post secondary goals.

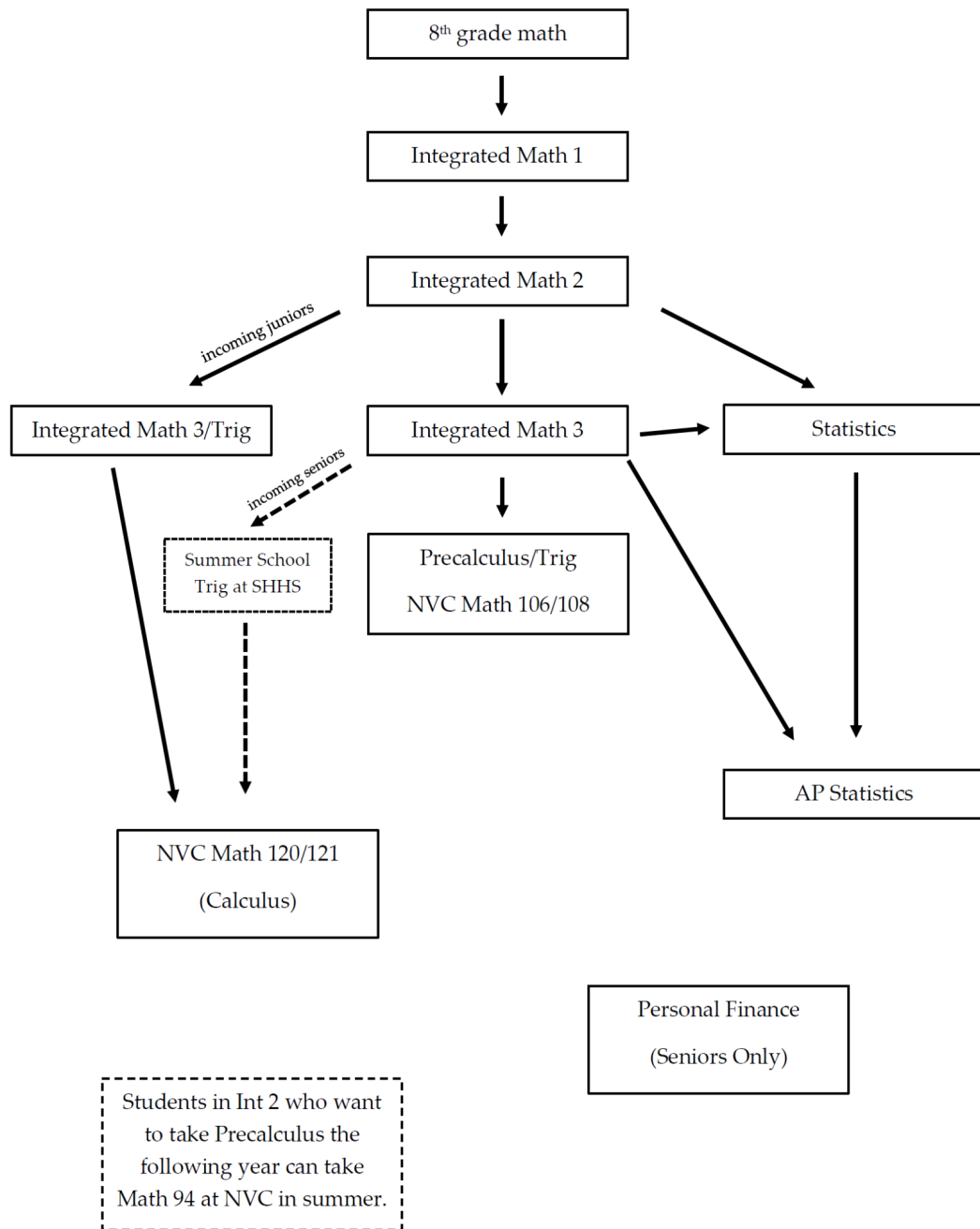
Feedback from current Calculus students

- “After skipping 6th grade math, I felt the gaps at every level of high school math.”
- “Because I was advanced, I felt pressured to be the smartest and get A’s all the time.”
- “I wasn’t advanced in middle school and took summer school to get to Calculus. When I didn’t get advanced, it made me feel stupid and like I didn’t deserve to make it to Calculus.”

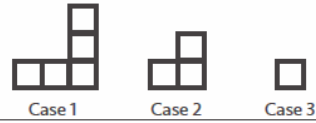
New Math Acceleration Pathway for Calculus

RLS: 6th grade math → 7th grade math → 8th grade math

SHHS: Integrated Math 1 → Integrated Math 2 → Integrated Math 3/Trig → Calculus

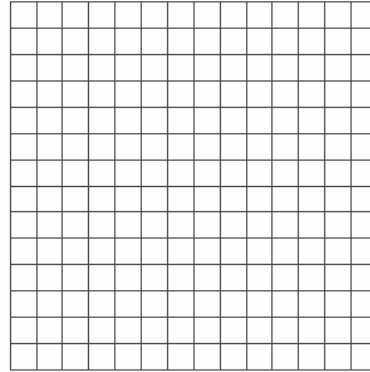


Updated Math Sequencing



Make a table using numbers.

Make a coordinate graph to illustrate the pattern.



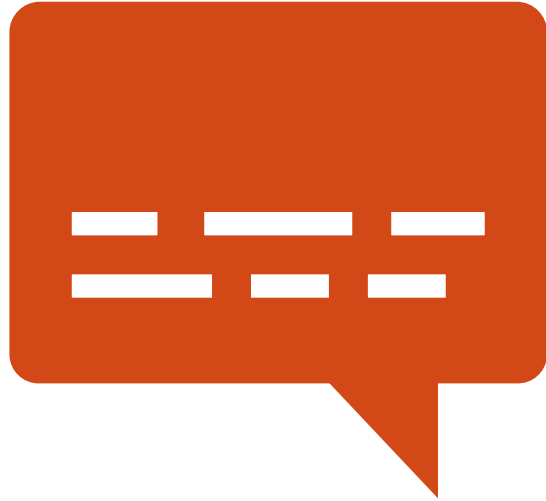
Describe the way the pattern is increasing or decreasing.

Describe your function using an algebraic expression that shows the number of blocks in any case number.

Differentiation
in Instruction-
Low floor/high
ceiling example

NEXT STEPS

- Begin detracking process with incoming 6th graders for Fall 2022 so all students are in core grade level mathematics.
- Determine need for additional informational sessions to explain sequencing further.
- Adopt California Department of Education approved Framework in July.
 - New approved framework will likely include recommendations for detracking
- Provide any needed training to teachers on differentiation techniques or strategies.



Questions/Comments/Feedback