Sayreville math
Parent Information Session

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As we are waiting post in the chat

About how many cheeseballs will fit in the tray?

Agenda

- ❑ The “WHY”
- ❑ Math Goals 23-24Math Program Flow
- ❑ Onward and Upward
- ❑ Advanced Math Program (Rubric, Elements, Point Value, Timeline and Summer Assignment)
- ❑ Solving Math Problems (different components)
- ❑ Resources for Math Programs
- ❑ Advanced Math Courses in High School

Topics

- ❑ Criteria for Advanced Honors placement
- ❑ Notification/Letters of Acceptance
- ❑ Summer Assignment for accepted students

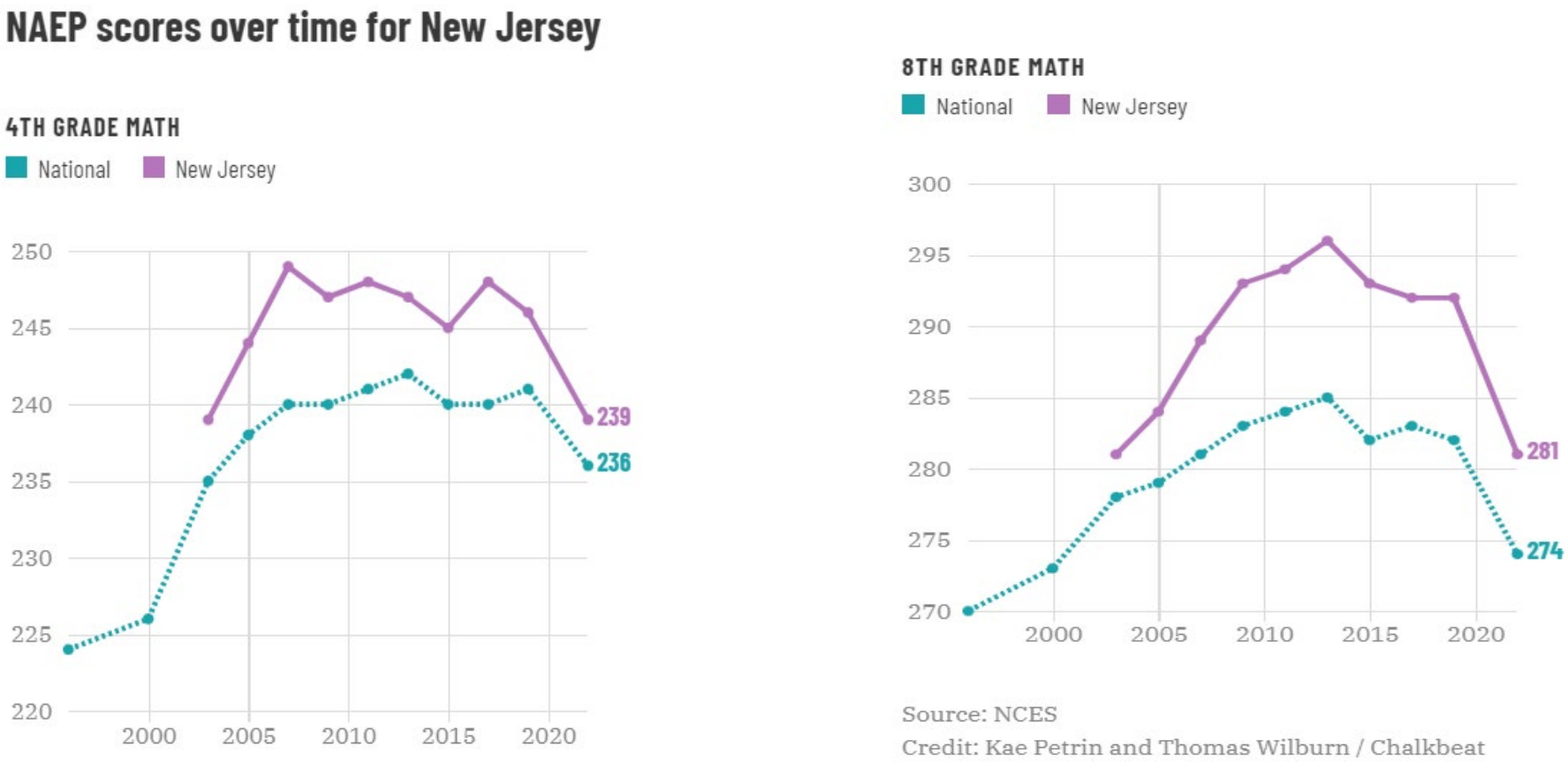
Presentation

- All questions will be answered after significant parts of the presentation.
- Questions can be posted on the chat.

Why? Research and data

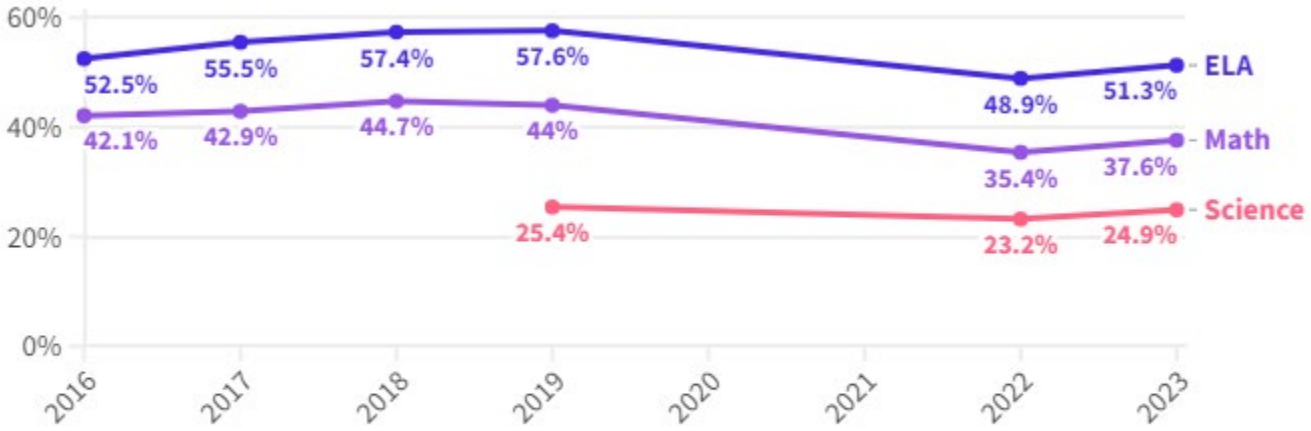
- The NAEP mathematics assessment measures students' mathematics knowledge and skills and ability to apply their knowledge in problem-solving situations.
- Nationally, fourth and eighth-grade students who took the National Assessment of Educational Progress, or NAEP, last year saw the most significant dips in math scores since 1990, when the exams were first given.
- In New Jersey, eighth-grade math scores dropped 11 points between 2019 and 2022, while fourth-grade scores in the same subject dropped 7 points during the same time frame.

Why? Research and data



Why? Research and data

The New Jersey Department of Education released the New Jersey Student Learning Assessment results for the 2022-2023 school year.
Data for math shows the percentage of students who met or exceeded expectations.



NJSLA exams were not given in 2020 or 2021 due to the COVID-19 pandemic. The science exam was not given until 2019.

Onward and upward

- The increased focus on math comes after the pandemic “wreaked havoc” on learning in secondary schools and widened gaps based on race in student performance with math scores.
- Better math instruction in earlier grades is a key to helping students succeed academically and beyond.
- Students who pass an introductory course on algebra by 9th grade are twice as likely to graduate from high school and attend college.
- Resources and professional development opportunities are available to students and teachers in Sayreville.

Onward and upward

Sayreville School District Math Goal (23-24)

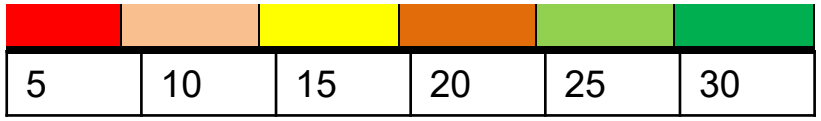
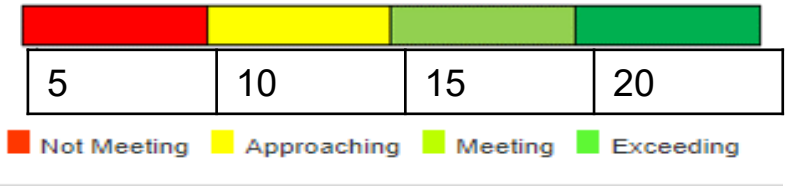
Students in Pre-K- 12th Grade will show improvement in their overall mathematic skills as evidenced by:
a. 65% of 11th-grade students passing the 2024 New Jersey Graduation Performance Math Assessment (2022-23 baseline is 56.5%).
b. 45% of the students enrolled in grade 7 meeting or exceeding expectations as measured on the 2024 New Jersey Student Learning Assessment-Math (2022-2023 cohort baseline is 32.3%)

Advanced Math Honors Program

Incoming Grade 6 (Current 5th Graders)

Rubric
Advanced Honors Program in Mathematics

Elements of the Rubric
• Average of Grade 5 Form A and Grade 5 Form B Math Benchmark Scores
• Average of Grade 5 T1 and T2 Standards Based Report Card
• District Advanced Honors Mathematics Test
• NJSLA Grade 4 Math Score
• Teacher Recommendation Score

Criteria	Total points possible
Average of Linkit Grade 5 Math Form A and Form B scores 	30
Average of T1 and T2 Grade 5 Standards-Based Report card 	20
Grade 5 Teacher Recommendation Score	40
NJSLA Grade 4 Math Score 	60
District Math Test Score	100
Total points	250

Steps to identify students in Advanced Honors Program in Mathematics

Steps	Elements of the Rubric
1	Average of Linkit Grade 5 Form A and Form B Math Benchmark Scores
2	NJSLA Grade 4 Math Score
3	Average of T1 and T2 Grade 5 Standards-Based Score
	Students are invited to take the Honors Test
4	Teacher Recommendation Score
5	District Advanced Honors Mathematics Test

Eligible Students

Eligible students will be notified via email in the week of **May 27th, 2024,** to take the **June 3rd, 2024** District Performance Test.

Acceptance Letters

Students who are accepted to the program will be notified via email in the week of **June 17, 2024.**

Some students transfer out of the district or get accepted into vocational schools. As the spots open, eligible students will be notified.

Summer Assignment

Students accepted into the Advanced Honors Grade 6 program will have a summer assignment posted on the website.

Summer Assignment (Last Year)

Timelines

1. Week of May 27, 2024, an email will be sent to see if the student can take the District Performance Test.
2. All eligible students will take the District Performance Test on June 3, 2024.
3. All accepted students selected in the Grade 6 Advanced Honors Math Class will be notified via email on June 17, 2024.

Solving Math problems

Reasoning and Computation with Precision

Computation problem

17. A basketball team scored a total of 747 points for the season. This was 9 times the number of points scored in the first game. How many points were scored during the first game?

A. 73

B. 75

C. 82

D. 83

Computation problem

The area of a rectangular patio is $5\frac{5}{8}$ square yards, and its length is $1\frac{1}{2}$ yards. What is the patio's width, in yards?

A. $3\frac{3}{4}$

B. $4\frac{1}{8}$

C. $7\frac{1}{8}$

D. $8\frac{7}{16}$

Modeling problem

Shannon is building a rectangular garden that is 18 feet wide and 27 feet long.

3. Part A

Write an equation that represents the area of Shannon's garden. In your equation, let *g* represent the area of Shannon's garden. Then solve your equation.

Enter your equation and your solution in the space provided.

Part B

Shannon is putting a fence around the garden, except where there is a gate that is 3 feet wide.

One foot of the fence costs $43. The cost of the gate is $128.

Write an expression that represents the total cost of the fence and the gate.

Explain how you determined your expression.

Enter your expression and your explanation in the space provided.

Part C

Use your expression from Part B to find the total cost, in dollars, of the fence and the gate.

Enter your answer in the space provided.

MODELING PROBLEM

Unit 1 #2 Rubric Part A	
Score	**Description**
2	Student response includes each of the following 2 elements: • Computation component: 486 square feet • Modeling component: $18 \times 27 = g$
1	Student response contains 1 of the 2 elements.
0	Student response is incorrect.

Unit 1 #2 Rubric Part B	
Score	**Description**
3	Student response includes each of the following 3 elements. • Modeling component: The student provides an expression to represent the total cost of the fence and gate. For example: "$43 \times (18 + 18 + 27 + 27 - 3) + 128$" OR other valid expression. • Modeling component: The student explains that the expression in parentheses "$18 + 18 + 27 + 27 - 3$" is needed to find the perimeter of the lawn minus the gate to find the length of fence needed. • Modeling component: The student explains that the length of fence determined has to be multiplied by the cost of the fence and then the cost of the gate has to be added to the result. Note: The term ***perimeter*** does not have to be used.
2	Student response includes 2 of the 3 elements.
1	Student response includes 1 of the 3 elements.
0	Student response is incorrect or irrelevant.

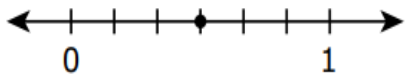
Unit 1 #2 Rubric Part C	
Score	**Description**
1	Computation component: $3,869 Note: A student who correctly evaluates an incorrect expression for finding the total cost of the fence and gate will receive the computation point.

6 points

Reasoning and Computation with Precision

24. Part A

Shaun plotted a point on the number line by drawing 5 equally spaced marks between 0 and 1 and placing a point on the third mark. He claims that the point represents the fraction $\frac{3}{5}$ because each mark represents $\frac{1}{5}$, so the third mark represents $\frac{3}{5}$.



- Explain why Shaun's reasoning is incorrect.
- Explain how you can use the number line to determine the fraction that Shaun's point represents.
- Determine the fraction that Shaun's point represents.

Enter your explanations and your answer in the space provided.

Part B

Shaun wants to write a fraction that is equivalent to the fraction $\frac{2}{3}$.

Describe how Shaun can find a fraction that is equivalent to $\frac{2}{3}$.

Enter your description in the space provided.

Unit 3 #24 Rubric Part A	
Score	**Description**
3	Student response includes each of the following 3 elements. • Reasoning component: Explanation of why Shaun's reasoning is incorrect • Reasoning component: Explanation on how to use the number line to determine the fraction that Shaun's point represents • Computation component: $\frac{3}{6}$ Sample Student Response: Shaun's reasoning is incorrect because he drew 5 lines between 0 and 1 and said that this divided the line into fifths. This actually divides the line into sixths because there are six equal sections between 0 and 1. Shaun's point represents the fraction $\frac{3}{6}$ because each mark on the number line is $\frac{1}{6}$. So, the third mark is the point $\frac{3}{6}$.
2	Student response includes 2 of the 3 elements.
1	Student response includes 1 of the 3 elements.
0	Student response is incorrect or irrelevant.

Reasoning and Computation with Precision

NJSLA PRACTICE PROBLEMS

MORE PRACTICE PROBLEMS

MATH FLUENCY

Accuracy and efficiency, as opposed to speed, are the most essential aspects of fluency.

- Contributes to students' ability to solve more complex problems quickly and accurately.
- Leads to success in students' future mathematics courses and careers.
- Builds confidence in students' math ability.

MATH FLUENCY

NJ DEPARTMENT OF EDUCATION
STAMP
STANDARDS TRANSPARENCY AND MASTERY PLATFORM

Grade 5 Mathematics: Where to Focus

This document shows where students and teachers should spend more time, relative to other clusters, in order to meet the expectations of the 2023 New Jersey Student Learning Standards for Mathematics.

Some clusters of standards were written to require greater emphasis than others. This varied emphasis is based on the depth of the mathematical ideas in the cluster, the time that they take to master, and/or their importance to future mathematics or the demands of college and career readiness. More time in these particular areas is also necessary for students to meet the Standards for Mathematical Practice. Therefore, not all content in a given grade is emphasized equally in the standards.

To say that some things have greater emphasis is not to say that anything in the Standards can be neglected or omitted in instruction.

Neglecting material will leave gaps in student skill and understanding and may leave students unprepared for the challenges of a later grade.

Students should spend the majority of their time on the major work of the grade (**M**). Supporting work (**S**) and, where appropriate, additional work (**A**) can engage students in the major work of the grade.

Major, Supporting, & Additional Clusters for Grade 5

Emphases are given at the cluster level. Refer to the New Jersey Student Learning Standards for Mathematics for the specific standards that fall within each cluster.

Key: **M** — Major Clusters, **S** — Supporting Clusters, **A** — Additional Clusters

Indicator	Type	Cluster Heading
5.OA.A	A	Write and interpret numerical expressions
5.OA.B	A	Analyze patterns and relationships
5.NBT.A	M	Understand the place value system
5.NBT.B	M	Perform operations with multi-digit whole numbers and with decimals to hundredths
5.NF.A	M	Use equivalent fractions as a strategy to add and subtract fractions
5.NF.B	M	Apply and extend previous understandings of multiplication and division to multiply and divide fractions
5.M.A	S	Convert like measurement units within a given measurement system
5.M.B	M	Geometric Measurement: Understand concepts of volume and relate volume to multiplication and addition
5.DL.A	A	Understand and analyze data visualizations
5.DL.B	S	Represent and interpret data
5.G.A	A	Graph points on the coordinate plane to solve real-world and mathematical problems
5.G.B	A	Classify two-dimensional figures into categories based on their properties

Highlights of Major Work in Grades K–8

Grades	Topic
K–2	Addition and subtraction — concepts, skills, and problem solving; place value
3–5	Multiply and divide whole numbers and fractions — concepts, skills, & problem solving
6	Ratios and proportional relationships; early expressions and equations
7	Ratios and proportional relationships; arithmetic of rational numbers
8	Linear algebra and linear functions

Required Fluencies for Grade 5

5.NBT.B.5 Multiply multi-digit whole numbers using the standard algorithm

Progression of Math Fact Fluency Look Like Across Grade Levels

- Third Grade

Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and the relationship between addition and subtraction.

Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know all products of two one-digit numbers from memory.

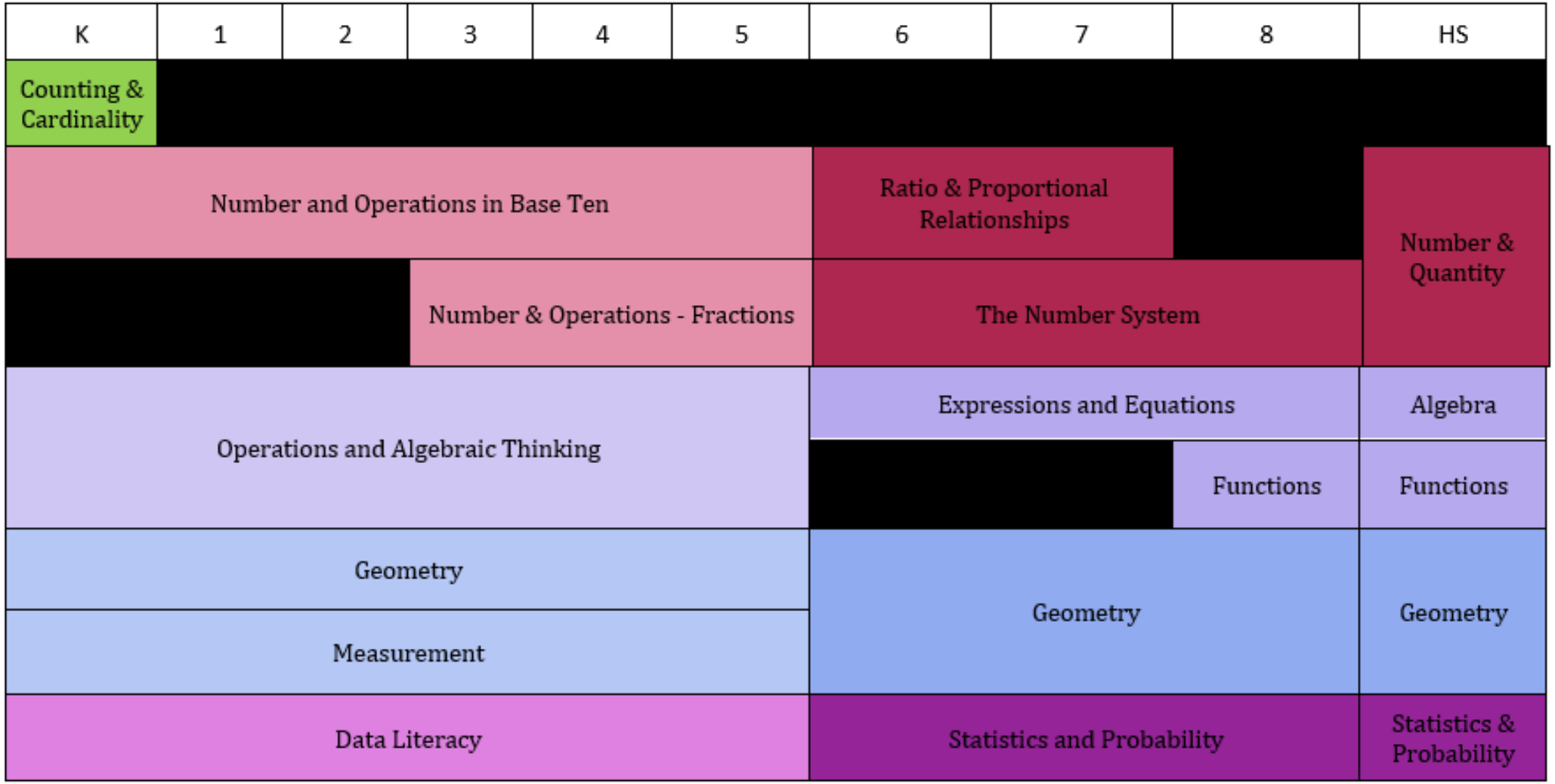
- Fourth Grade

Fluently add and subtract multi-digit whole numbers using the standard algorithm.

- Fifth Grade

Fluently multiply multi-digit whole numbers using the standard algorithm.

K–HS Domain Progression

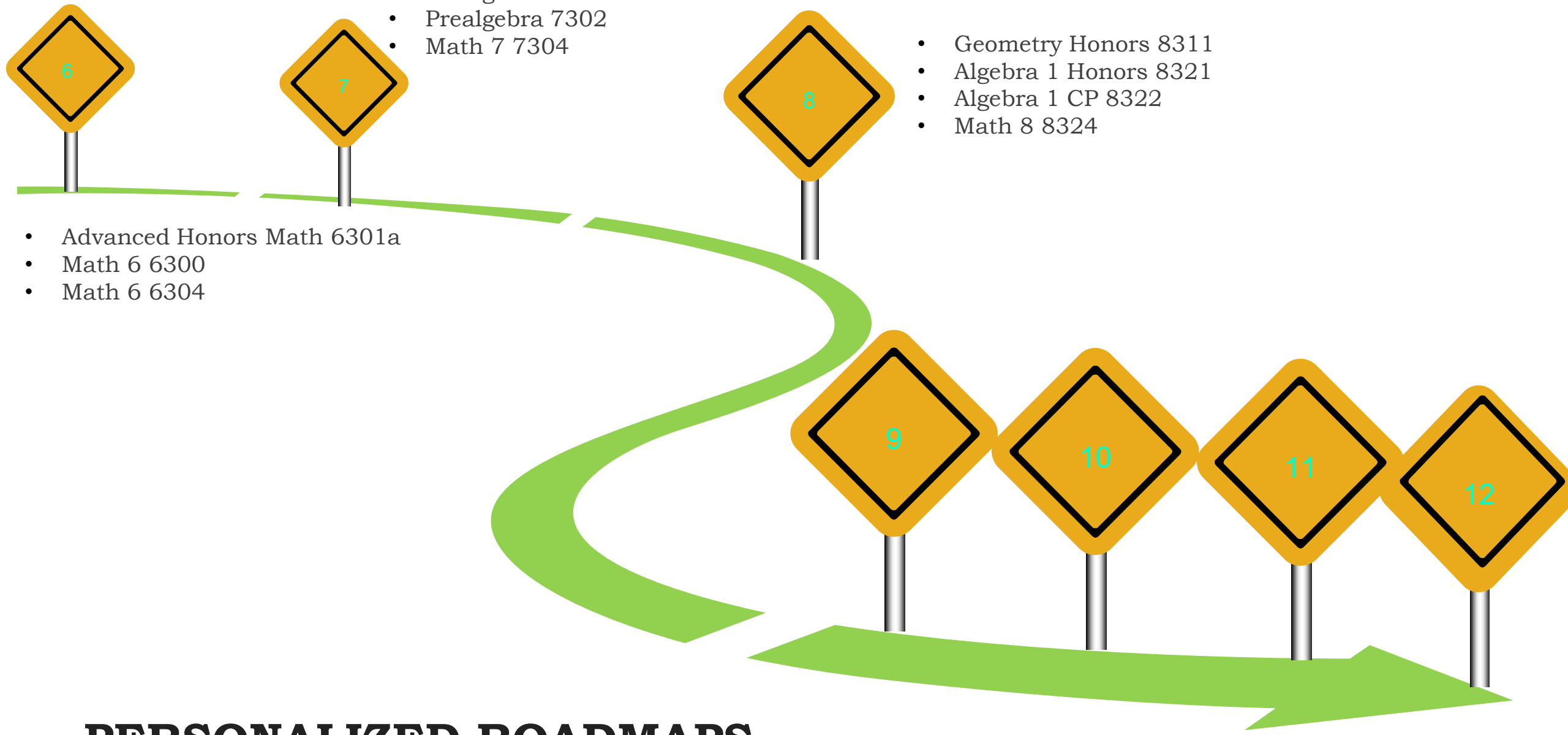


Math program flow

- Algebra 7 7301a
- Prealgebra Accelerated 7301
- Prealgebra 7302
- Math 7 7304

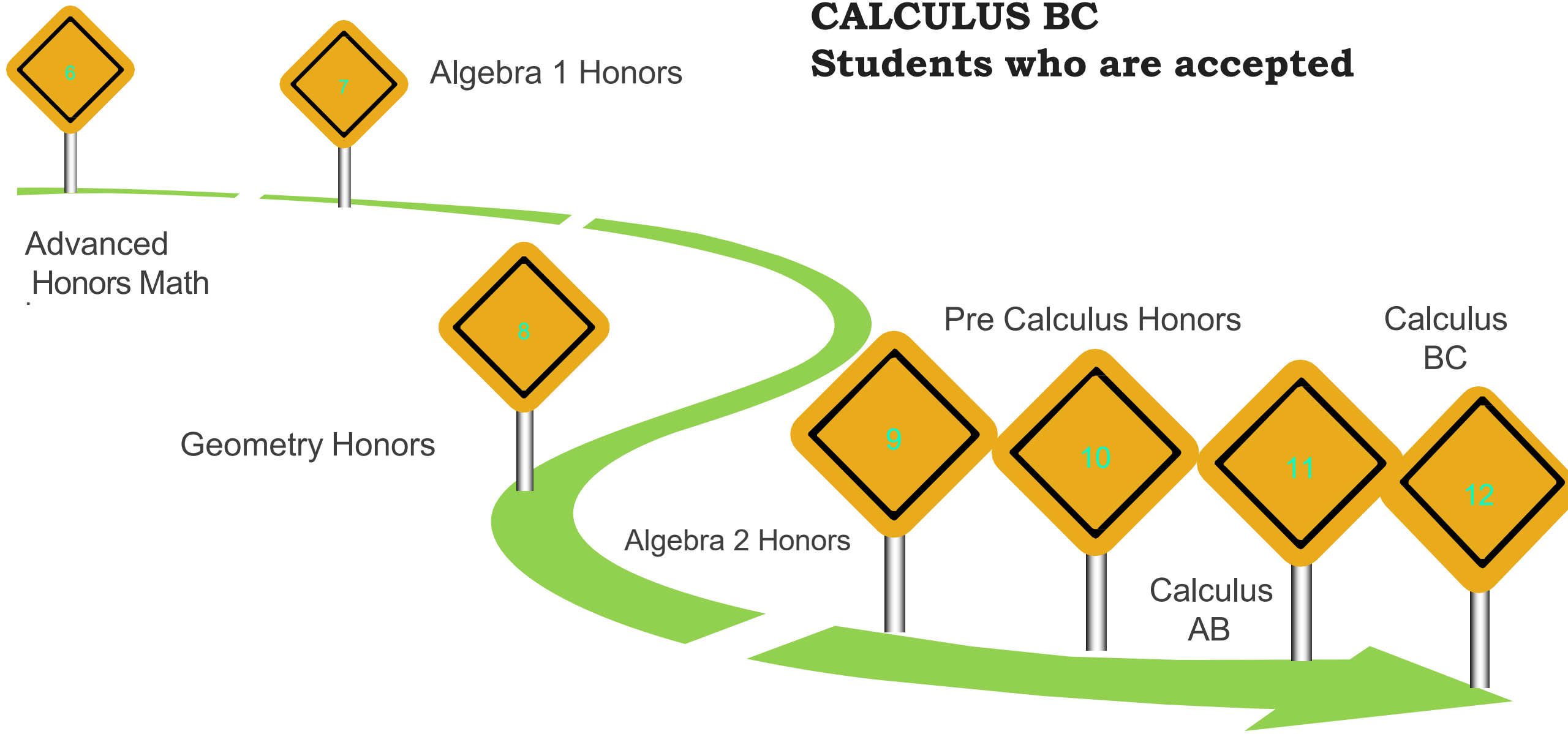
- Geometry Honors 8311
- Algebra 1 Honors 8321
- Algebra 1 CP 8322
- Math 8 8324

- Advanced Honors Math 6301a
- Math 6 6300
- Math 6 6304

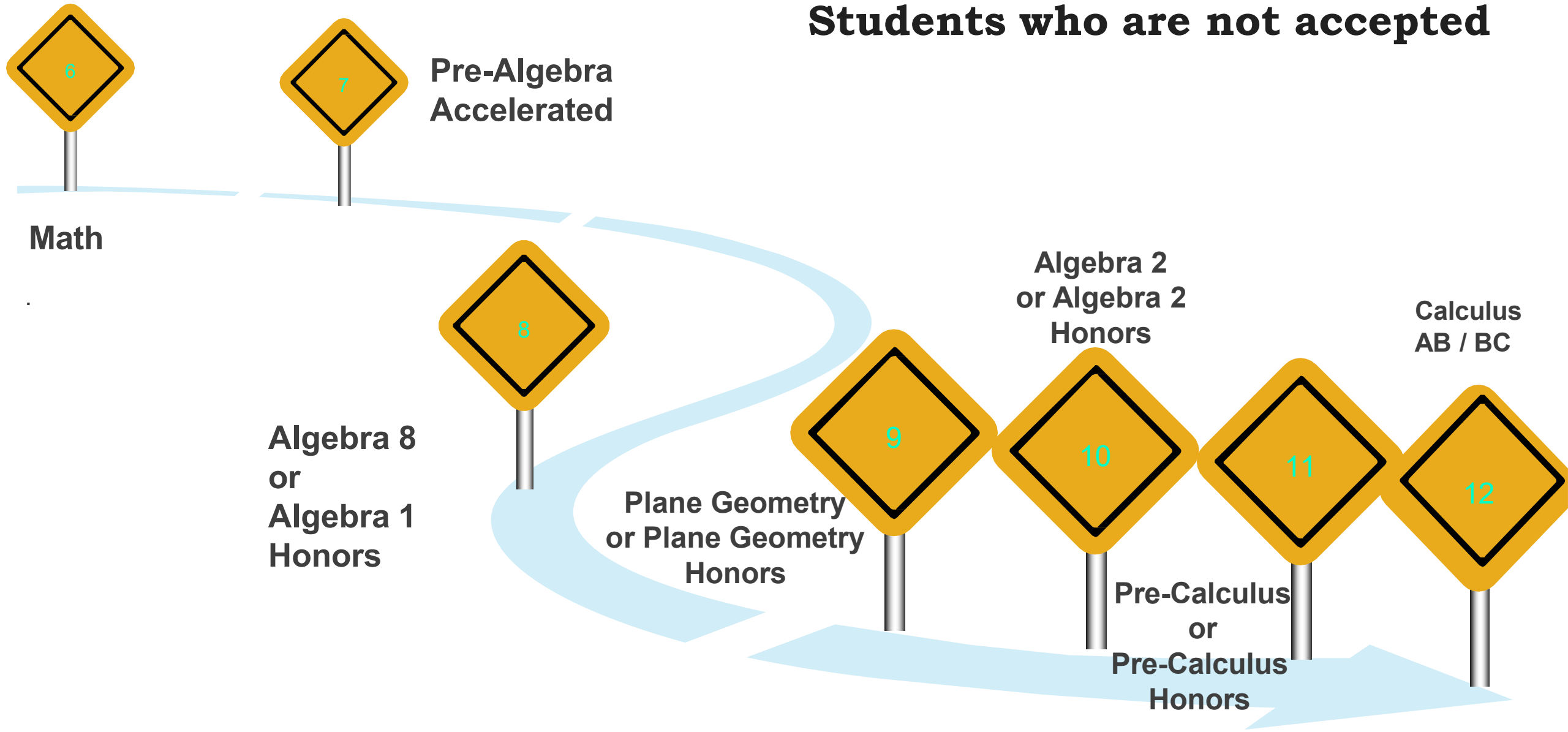


PERSONALIZED ROADMAPS

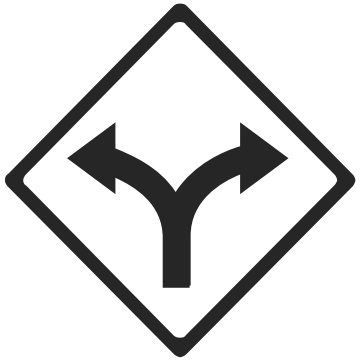
TYPICAL ROADMAP TO CALCULUS BC
Students who are accepted



ROADMAP TO CALCULUS BC
Students who are not accepted



Advanced placement Choices in the High School



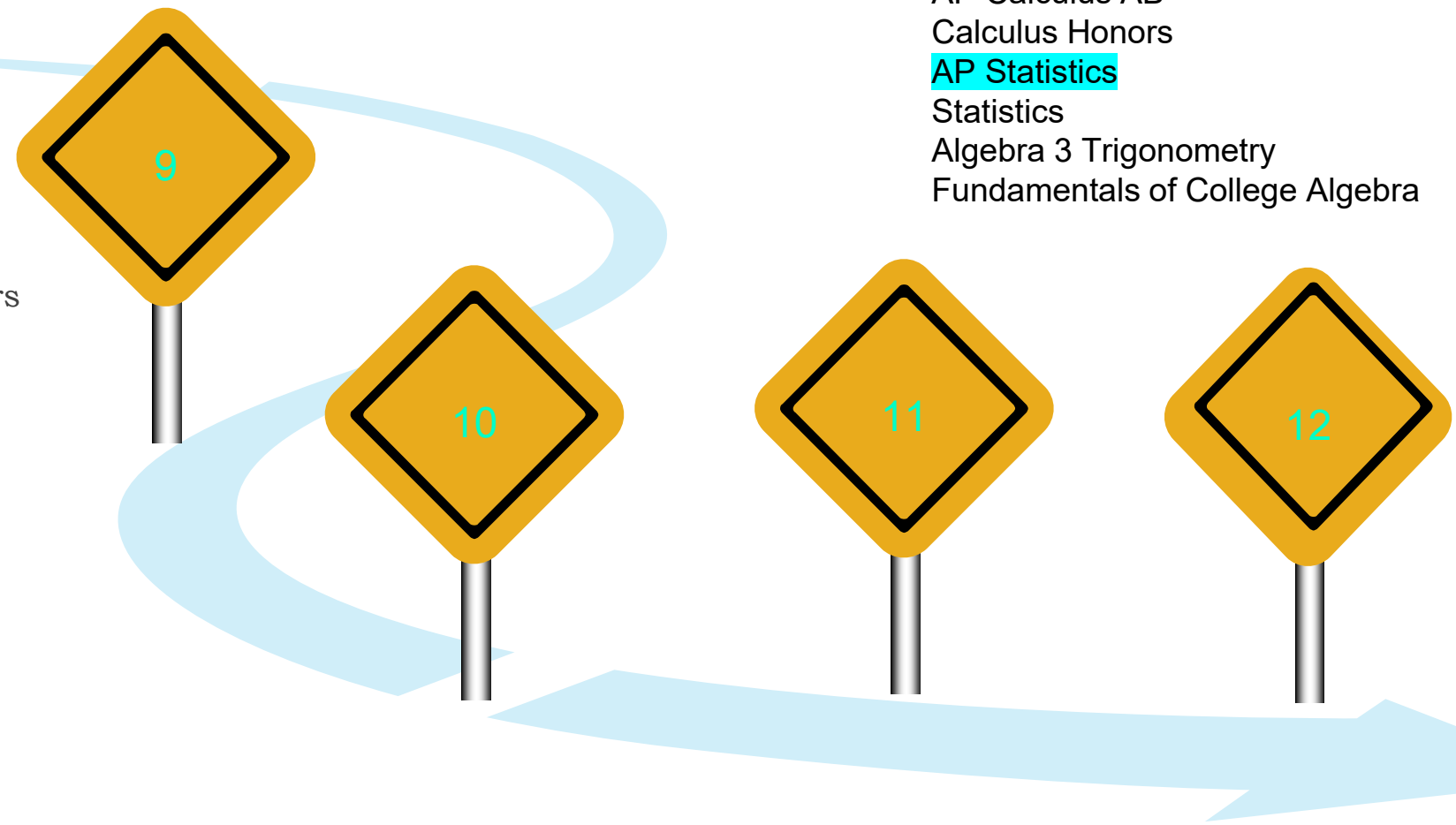
Advanced Placement Computer Science A
Advanced Placement Computer Science Principles

Advanced Placement Statistics

Advanced Placement Calculus AB
Advanced Placement Calculus BC
Advanced Placement Precalculus

SMMHS

PERSONALIZED ROADMAPS



- Algebra 2 Honors
- Plane Geometry Honors
- Plane Geometry
- Algebra 1

Algebra 2 CP
Algebra 2 Core
AP Precalculus
Precalculus Honors
Precalculus CP
AP Calculus BC
AP Calculus AB
Calculus Honors
AP Statistics
Statistics
Algebra 3 Trigonometry
Fundamentals of College Algebra

Resources for reasoning and computation

- SAVVAS EnVision https://sso.rumba.pk12ls.com/sso/login?profile=eb&service=https://cat.easybridge.pk12ls.com/ca/dashboard.htm&EBTenant=pat-nj
- Teaching Channel Inspirational Teaching Videos: Covering Common Core, Math, Science, English And More (teachingchannel.com) Illustrative Mathematics Illustrative Mathematics | K-12 Math | Resources for Teachers & Students
- NCTM Illuminations Illuminations (nctm.org)
- K-5 Math K-5 Math Teaching Resources
- National Library of Virtual Manipulatives National Library of Virtual Manipulatives (usu.edu)
- Inside Mathematics Inside Mathematics | Inside Mathematics
- Conceptual Vocabulary Cards – The vocabulary words are provided with a definition and visual representation. They are also available in Spanish, French and Chinese. https://www.graniteschools.org/mathvocabulary/vocabulary-cards/
- Virtual Math Manipulatives https://docs.google.com/presentation/d/e/2PACX-1vSXrARvaYRKtX3ELH8VFNt19ZJ-Ku5uM-Dz_DoNBUjEwg8Q8gYaMaj6SzLAFSwREthIXIVBl4En-evH/pub?start=false&loop=false&delayms=3000&slide=id.g27b693dca5_0_261
- https://nj.mypearsonsupport.com/ForParent/ - online tutorials/practice tests
- https://bealearninghero.org/learning-tools/students/ - practice activities
- https://solveme.edc.org/whoami/


#mathislife
KEEP CALM AND SHOW YOUR WORK
The Best ANGLE From Which To Approach A PROBLEM Is The TRY-ANGLE
√-1 MATH
Multiplication 0-12
FLASH CARDS
AGES 8-UP
MATHEMATICS is GEOMETRY PROBABILITY ALGEBRA STATISTICS CALCULUS
54 Flash Cards
FRACTIONS
Understand Fractions from a Whole to Ninths
any questions?