

Instruction in Action: Math

November 13, 2023 MVLA Board Presentation



Objective: Give a brief overview of what is happening in math at MVLA.

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LAHS Department Coordinator

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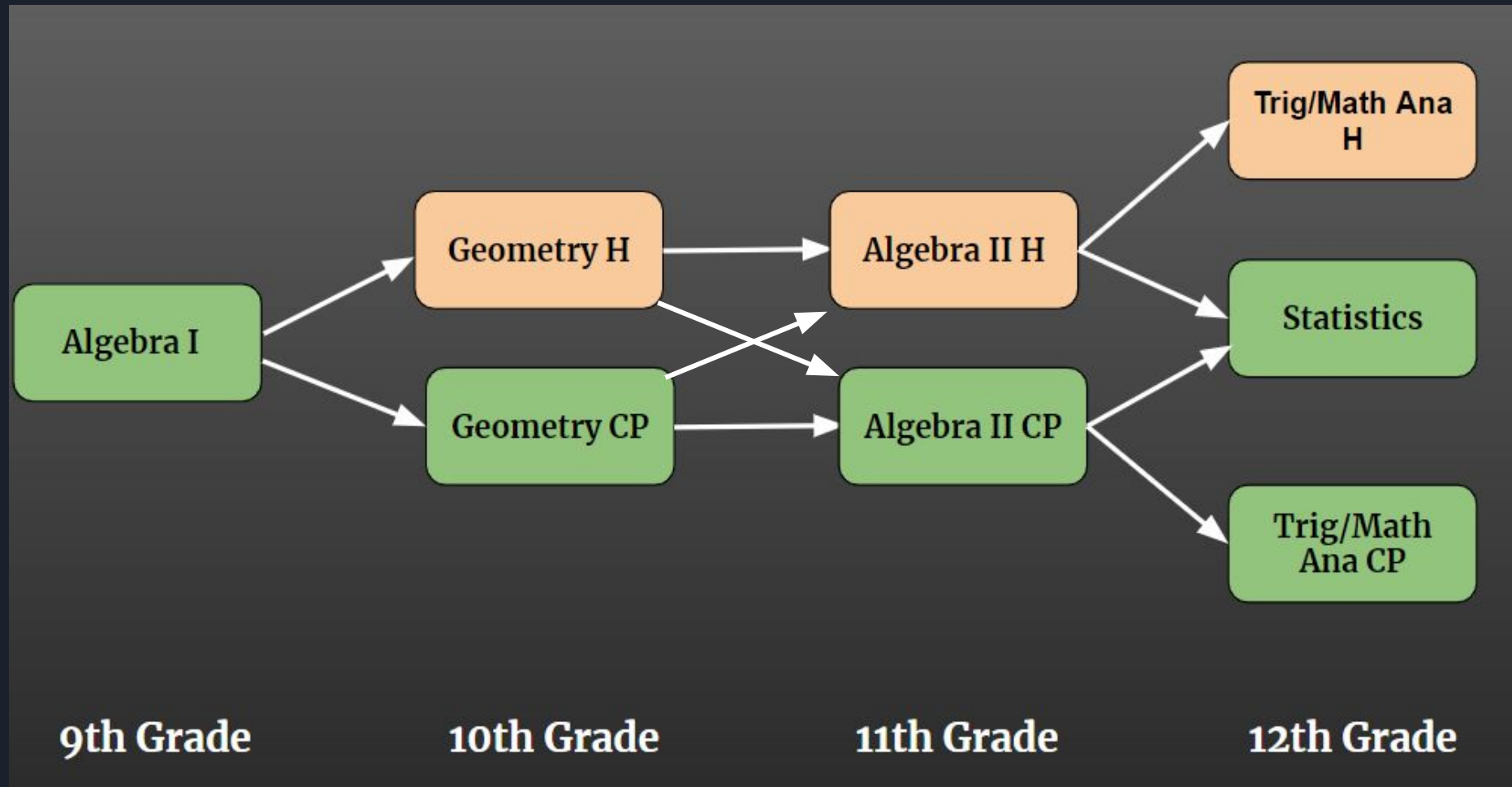
MVHS Department Coordinator



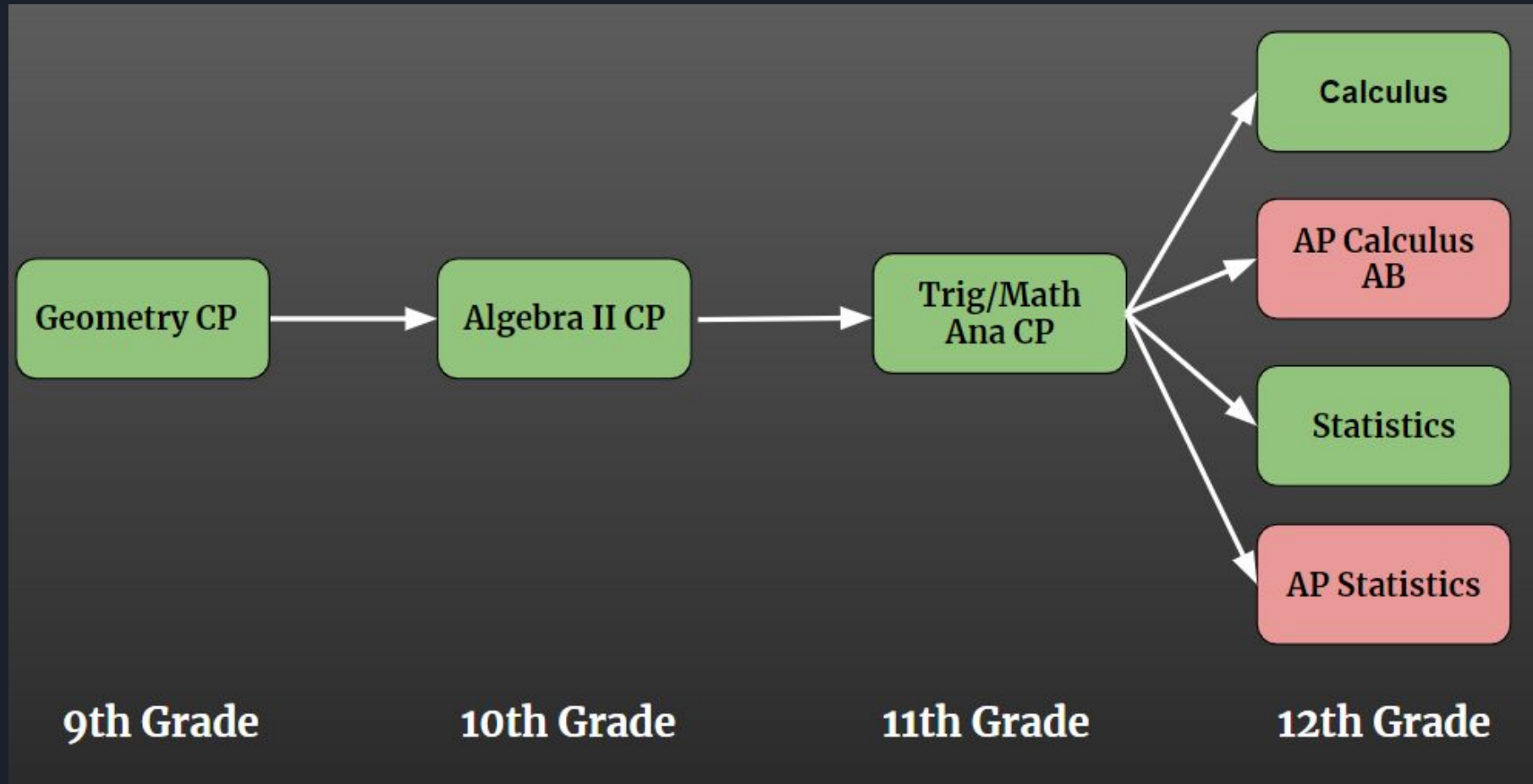
Agenda:

- Typical Math Pathways
- What We are Excited About
 - LAHS: Data Science
 - MVHS: Literacy
- Data Points:
 - How We Measure Effectiveness
 - Number of Students Taking Math Classes
- Challenges
- Professional Learning

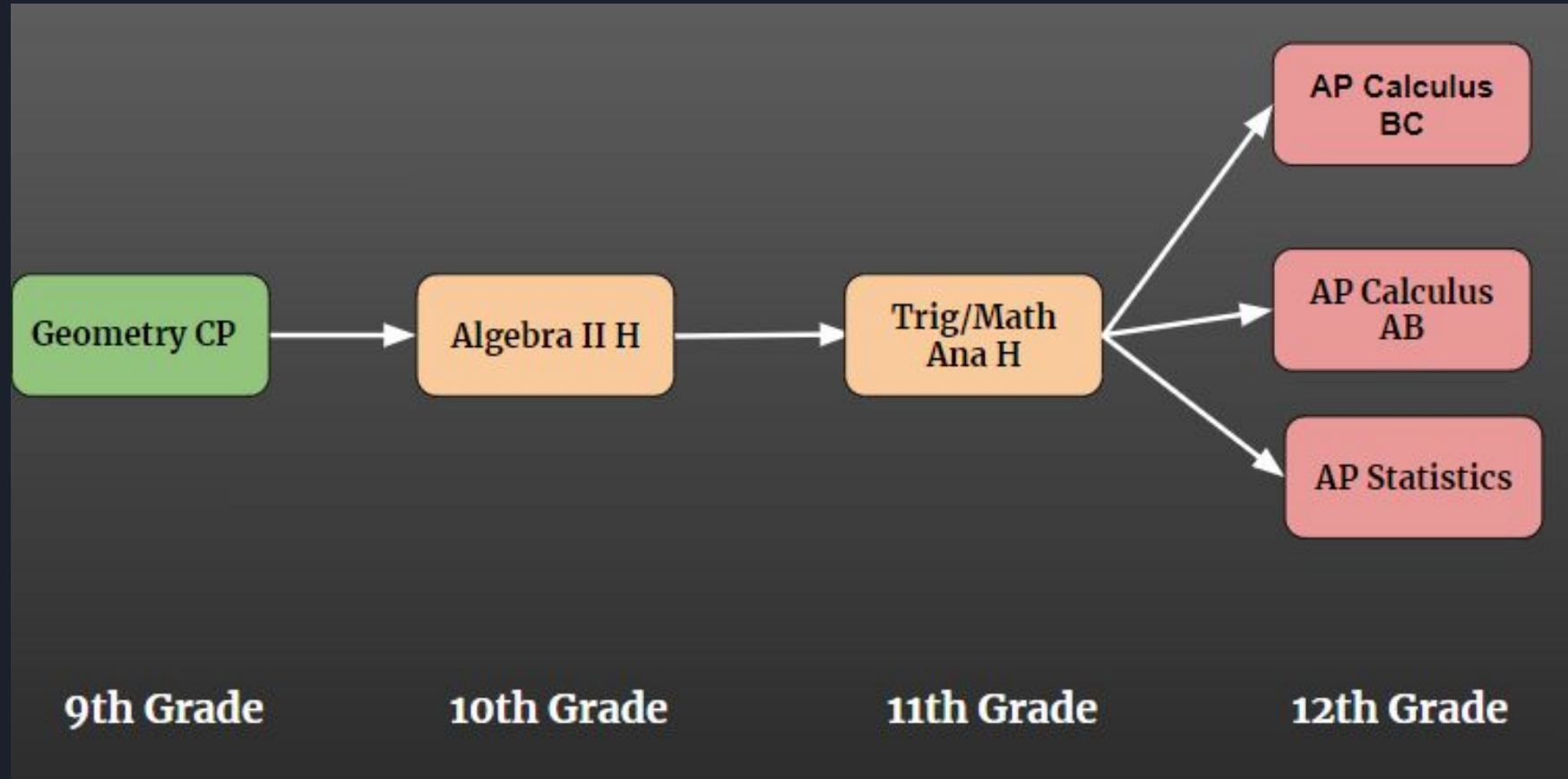
Typical Math Pathways: Algebra I



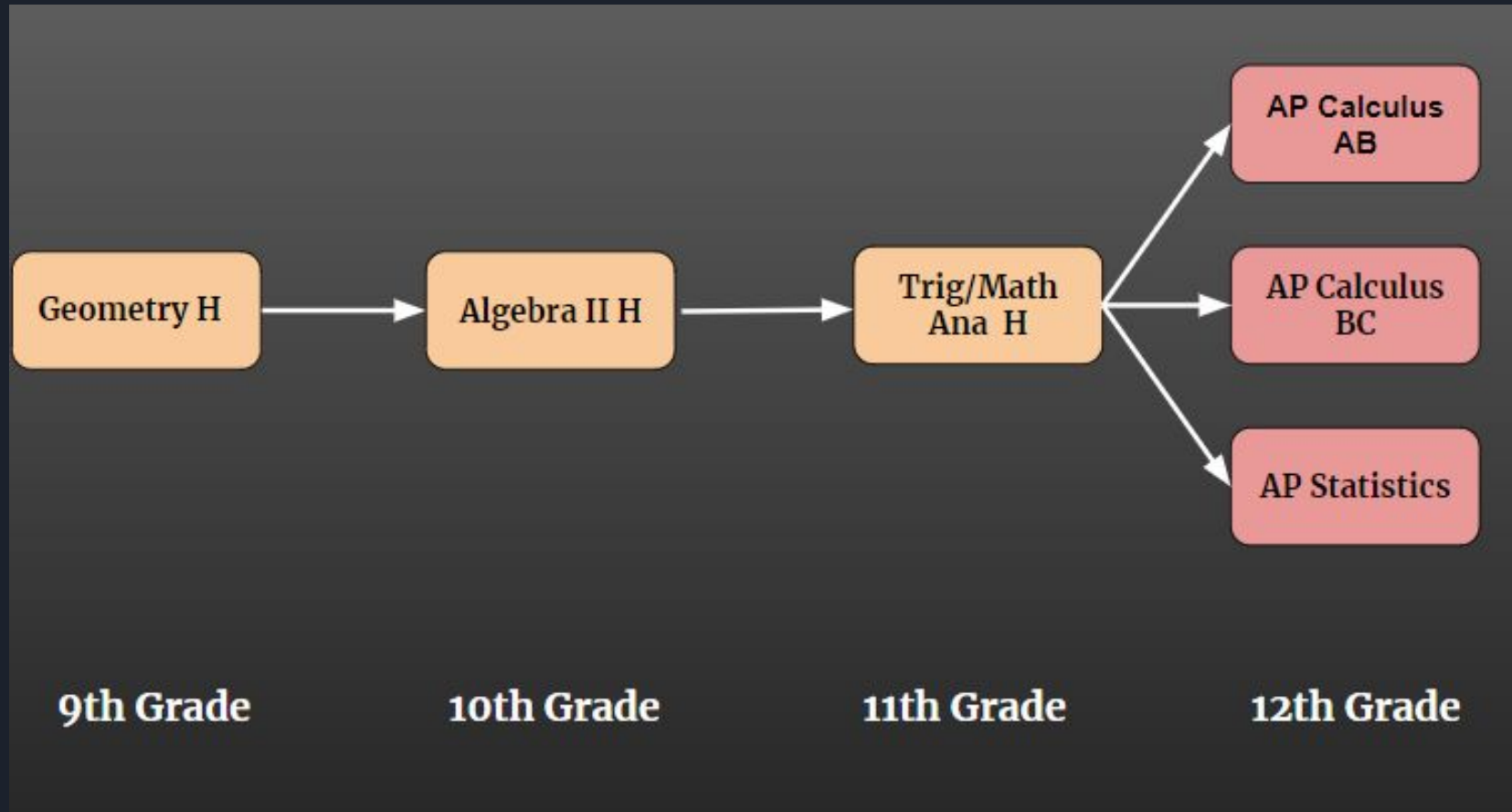
Typical Math Pathways: Geometry



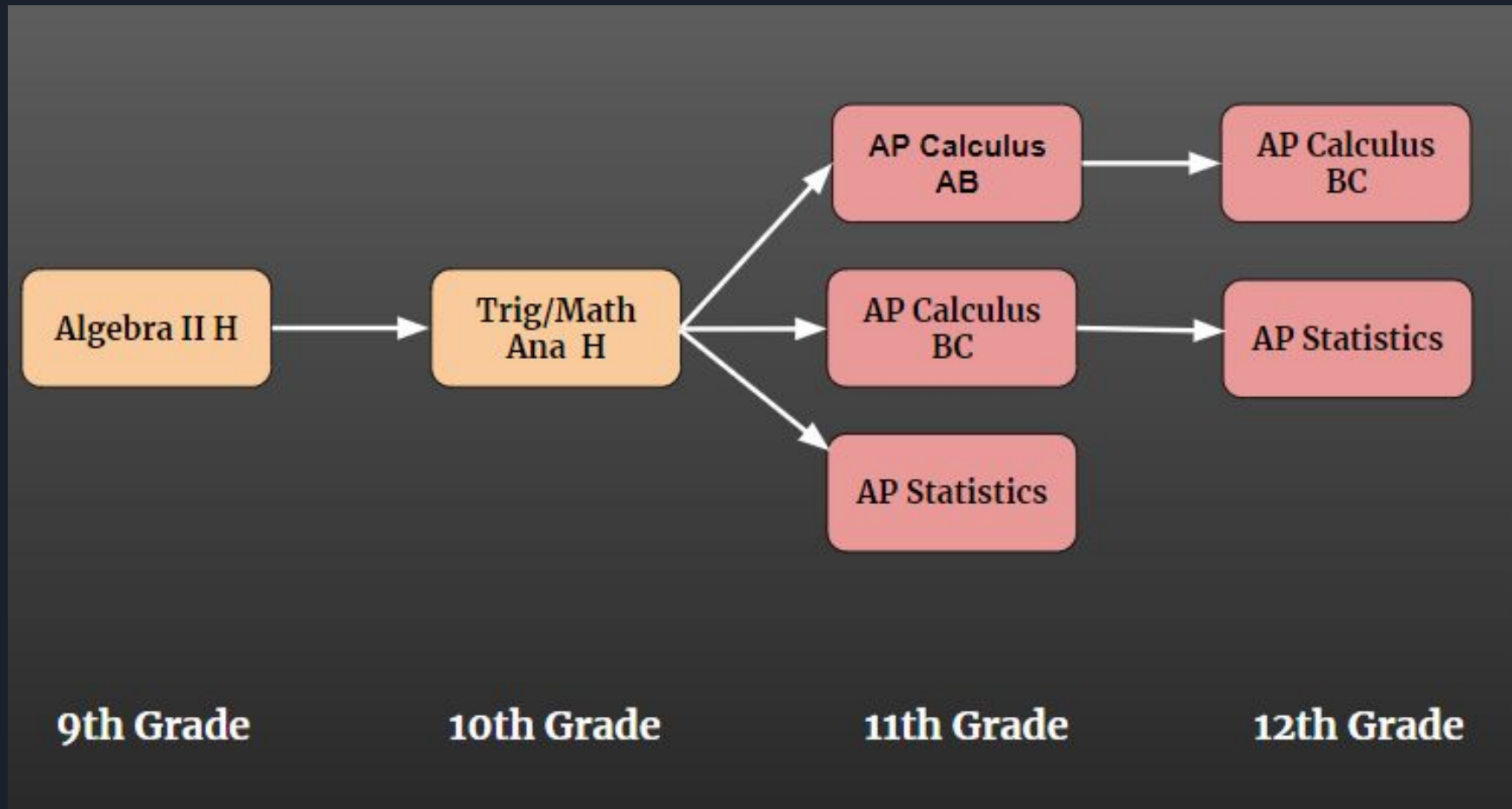
Typical Math Pathways: Alternative Geometry



Typical Math Pathways: Geometry H



Typical Math Pathways: Algebra II H





What We are Excited About:

Data Science

Course Kata



What We are Excited About:

Literacy

- Math department will focus on the CCSS Mathematical Practice Standard:
Make sense of problems and persevere in solving them. Provide literacy support for students to develop their ability to read, process, and discuss meaning in math problems. (e.g. graphic organizer, language patterns (sentence frames), color-coding, annotating texts, etc)
 - Constructing Meaning Cohort 1 and 2
 - Walkthroughs



Challenges

At LAHS: Reintroduction of ELL program has led to a wider range of incoming Math abilities and new challenges in our Math classes.

At MVHS: We have removed Math Mastery from our course offerings. We have spent multiple pullout days on creating a more accessible and supportive Algebra 1 curriculum. This is a continual work in progress as we adapt to student needs.

Treating Math as a Race:

At both sites, we have a growing number of students who are racing to get through the highest levels of math available even though they may not be ready.



Challenges Continued:

- AP HeadStart: Help recruit and retain AVID students in AP Classes
- Retaining rigor in college prep classes in order to make it possible for students to succeed in Honors or AP classes in the following year.
- Spiral review of concepts from previous years to support new learning



2023-24 Data Points: Number of Students Taking Math Classes

Percent of Students taking Math Classes:

LAHS: 98% (2072 out of 2116)

MVHS: 95% (2079 out of 2204)

Percent of students exceeding standards on the SBAC:

LAHS: 53% (216 out of 405)

MVHS: 50% (237 out of 472)

2023-24 Math Enrollment & 2023 SBAC Data



G P A	2023-24 Math Enrollment (as of 10/3/2023)							2023 SBAC Math Data (of students still enrolled and taking a math course)					
	Course	Total Course Enrollment	8	9	10	11	12	14	Total Testers	Exceeded (4)	Met (3)	Nearly Met (2)	Not Met (1)
4.15	AA5010 - AP Calc AB	118			1	59	58		55	43	12		
4.55	AA5011 - AP Calc BC	169		3	7	130	29		28	26	2		
4.05	AA6010 - AP Stat	148			5	10	133		116	92	18	6	
4.10	AB2010 - Geometry H	103		88	15								
4.84	AB3010 - Algebra II H	291		187	90	14							
4.61	AB4010 - Trig/Math Ana H	246	1	16	157	69	3		3	1	2		
4.44	AB5011 - Math 1C & 1D	41				3	38		37	37			
4.52	AB5012 - Math 2B	41				3	38		37	37			
2.94	AC1110 - Algebra I	127		113	11	1	2		1				1
2.51	AC1210 - Alg I Enh	28		13	7	4	4		2				2
2.85	AC2110 - Geometry	233		83	93	41	16		7			2	5
	AC2211 - Geo S2	15				6	9		6				6
4.81	AC3010 - Algebra II	187		17	73	82	15		10		1		9
2.78	AC3111 - Alg II Enhanced	15				6	9		6				6
2.92	AC4010 - Trig/Math Ana	172		2	18	100	52		47	3	14	21	9
3.46	AC5010 - Calculus	35				8	27		25	7	16		2
3.05	AC6010 - Statistics	65			1	3	61		52	9	14	14	15
1.92	MO1012 - SAI Alg 1.1	8		5	2	1							
2.47	MO1013 - SAI Alg 1.2	8		2	3	2	1		1				1
	MO3010 - LifeSkills Math I	7		1	2	3	1						
	MO3011 - LifeSkillsMath II	8		2		4	2						
	MO3012 - LifeSkillsMathIII	8		3	3	1	1						
	MO3013 - LifeSkillsMath IV	6			1		5		1				1
	MVHS Totals	2079	1	535	489	550	504	0	434	255	79	43	57

Note: Data includes duplicates because some students take multiple math courses

School	2023-24 Total School Enrollment (as of 10/3/2023)							2023 SBAC Math Data (Source: Indicator 1b)				
	Total School Enrollment	8	9	10	11	12	14	Total Testers	Exceeded (4)	Met (3)	Nearly Met (2)	Not Met (1)
MVHS	2204	1	538	489	572	572	32	472	237	92	58	85



MVHS AP Scores

MVHS	Score Level	2019	2020	2021	2022	2023
Calculus AB	1	6.7%	9.3%	17.9%	18.0%	13.4%
Calculus AB	2	31.5%	25.8%	30.4%	31.5%	35.7%
Calculus AB	3	39.3%	33.0%	26.8%	30.3%	23.2%
Calculus AB	4	18.0%	18.6%	19.6%	10.1%	17.0%
Calculus AB	5	4.5%	13.4%	5.4%	10.1%	10.7%
Calculus AB	Total Exams	89	97	56	89	112
Calculus AB	Mean Score	2.82	3.01	2.64	2.63	2.76
Calculus BC	1	0%	0%	0%	0%	0%
Calculus BC	2	7.3%	4.5%	17.4%	6.1%	4.2%
Calculus BC	3	16.7%	15.2%	20.8%	10.9%	16.9%
Calculus BC	4	0.7%	1.5%	0.9%	1.2%	1.5%
Calculus BC	5	60.4%	52.7%	45.6%	65.3%	57.0%
Calculus BC	Total Exams	96	112	149	147	142
Calculus BC	Mean Score	4.29	4.26	3.8	4.38	4.3
Statistics	1	0%	0%	0%	0%	0%
Statistics	2	2.6%	7.5%	3.2%	5.5%	7.3%
Statistics	3	13.0%	26.9%	11.3%	17.4%	30.9%
Statistics	4	36.4%	23.9%	33.9%	44.0%	41.5%
Statistics	5	48.1%	40.3%	48.4%	33.0%	17.9%
Statistics	Total Exams	77	67	62	109	123
Statistics	Mean Score	4.3	3.94	4.21	4.05	3.65

2023-24 Math Enrollment & 2023 SBAC Data

LAHS

G P A	2023-24 Math Enrollment (as of 10/3/2023)							2023 SBAC Math Data (of students still enrolled and taking a math course)					
	Course	Total Course Enrollment	8	9	10	11	12	14	Total Testers	Exceeded (4)	Met (3)	Nearly Met (2)	Not Met (1)
4.2	AA5010 - AP Calc AB	125			2	54	69		56	35	18	3	
4.74	AA5011 - AP Calc BC	139		1	24	94	20		17	16	1		
4.32	AA6010 - AP Stat	190		1	2	21	166		141	115	19	5	2
4.50	AB2010 - Geometry H	95		86	9								
4.35	AB3010 - Algebra II H	258	3	155	96	4							
4.51	AB4010 - Trig/Math Ana H	187		8	133	45	1		1	1			
4.47	AB5011 - Math 1C & 1D	40					40		36	36			
2.2	AC1010 - Algebra 9	121		121									
1.38	AC1110 - Algebra I	15		3	7	3	2						
2.59	AC1310 - Algebra 1.1	18		10	4	2	2						
	AC1311 - Algebra 1.2	17		1	8	3	5						
3.40	AC2010 - Geometry 9	76		75	1								
1.84	AC2110 - Geometry	123			102	17	3	1	1				1
3.19	AC3010 - Algebra II	274		17	104	129	24		22			4	18
2.96	AC4010 - Trig/Math Ana	174			30	120	23	1	20		9	9	2
2.95	AC5010 - Calculus	43			1	17	25		24	9	14		1
2.5	AC6010 - Statistics	53				5	48		44	7	13	15	9
3.03	AI0020 - Math Lab	27		20	6		1						
1.70	AI1210 - Alg I Enh	27		20	6		1						
2.01	AI2350 - Ess Math Concep	13					13		12			3	9
3.57	AI3100 - Alg II Skills	12				12							
2.00	MO1010 - SAI Pre Alg	3		3									
1.44	MO1012 - SAI Alg 1.1	17		5	9	3							
1.90	MO1013 - SAI Alg 1.2	17			9	5	3		1				1
2.22	MO1014 - SAI Geometry	8				6	2		2				2
	LAHS Totals	2072	3	526	553	540	448	2	377	219	74	39	45

Note: Data includes duplicates because some students take multiple math courses

2023-24 Total School Enrollment (as of 10/3/2023)							2023 SBAC Math Data (Source: Indicator 1b)					
School	Total School Enrollment	8	9	10	11	12	14	Total Testers	Exceeded (4)	Met (3)	Nearly Met (2)	Not Met (1)
LAHS	2116	3	510	553	545	501	4	405	216	76	45	68



LAHS AP Scores

LAHS	Score Level	2019	2020	2021	2022	2023
Calculus AB	1	2.0%	3.4%	5.4%	6.7%	3.1%
Calculus AB	2	13.9%	13.4%	18.0%	25.0%	19.5%
Calculus AB	3	17.8%	30.3%	33.3%	18.3%	18.8%
Calculus AB	4	27.7%	37.0%	18.0%	26.9%	16.4%
Calculus AB	5	38.6%	16.0%	25.2%	23.1%	42.2%
Calculus AB	Total Exams	101	119	111	104	128
Calculus AB	Mean Score	3.87	3.49	3.4	3.35	3.75
Calculus BC	1	0%	1		2	1
Calculus BC	2	2.3%	4.5%	8.6%	9.3%	5.5%
Calculus BC	3	7.0%	13.4%	7.6%	14.8%	11.0%
Calculus BC	4	18.6%	16.1%	13.3%	17.6%	13.8%
Calculus BC	5	72.1%	65.2%	70.5%	56.5%	68.8%
Calculus BC	Total Exams	86	112	105	108	109
Calculus BC	Mean Score	4.6	4.4	4.46	4.18	4.44
Statistics	1	3.2%	4.7%	3.4%	2.7%	6.7%
Statistics	2	2.1%	8.2%	2.6%	9.3%	8.7%
Statistics	3	18.9%	18.8%	23.1%	16.0%	20.7%
Statistics	4	37.9%	34.1%	38.5%	32.7%	32.7%
Statistics	5	37.9%	34.1%	32.5%	39.3%	31.3%
Statistics	Total Exams	95	85	117	150	150
Statistics	Mean Score	4.05	3.85	3.94	3.97	3.73

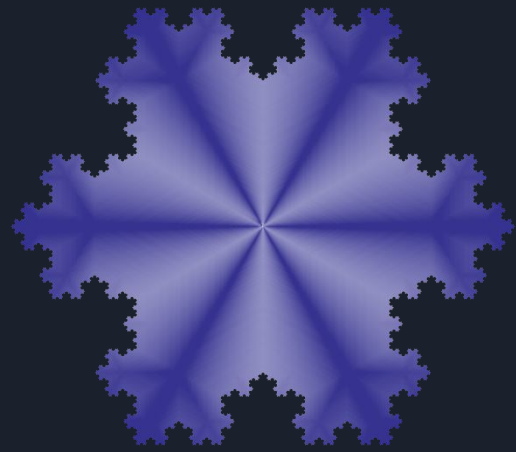
SBAC Math Scores for students in 8th grade year or their 11th grade year

School Year	2018-2019		2021-2022	2017-2018		2020-2021	2016-2017		2019-2020	2015-2016		2018-2019
Grade	8th Grade		11th Grade	8th Grade		11th Grade	8th Grade		11th Grade	8th Grade		11th Grade
District Achievement Level	MVWSD	LASD	MVLA	MVWSD	LASD	MVLA	MVWSD	LASD	MVLA	MVWSD	LASD	MVLA
Standard Exceeded: Level 4	44.23%	67.65%	50.77%	45.40%	73.21%	60.56%	44.05%	71.13%	COVID	37.00%	67.00%	49.79%
Standard Met: Level 3	14.04%	15.34%	18.95%	12.13%	15.00%	16.64%	19.21%	15.30%	COVID	18.00%	18.00%	19.02%
Standard Nearly Met: Level 2	15.58%	9.24%	12.16%	13.70%	7.86%	11.75%	15.87%	8.35%	COVID	22.00%	9.00%	14.35%
Standard Not Met: Level 1	26.15%	7.76%	18.12%	28.77%	3.93%	11.05%	20.88%	5.22%	COVID	22.00%	6.00%	16.84%



Professional Learning:

- CMC North and South Conferences
- Constructing Meaning Cohorts
- Pull out days for Course Team alignment work



Thank you!