Math Pathways

Students have multiple options for acceleration and support in math through their middle school and high school experience. An additional math support class is offered in Grades 5 - 9 for students that need it. Students are identified for these support classes based on their performance in their current/previous math class, standardized test scores and teacher input. Students with superior performance in math have options to accelerate their learning beginning as early as fifth grade. For specifics on the acceleration process, see the District's Single Subject Acceleration Process. The table below shows the different options from grade 5 - 12.

	Support Options if Needed	Standard Path		Single Acceleration (Available in Grade 8)		Double Acceleration	
Grade 5	Math Intervention Tier 3	Math 5				Accelerated MS Math 1	
Grade 6	Math Intervention Tier 3	Math 6				Accelerated MS Math 2	
Grade 7	Math Intervention Tier 3	Math 7				Intermediate Algebra	
Grade 8	Math Intervention Tier 3	Linear Algebra		Intermediate Algebra		Pre-AP Geometry	
Grade 9	Math Intervention Tier 3 Algebra AB	Intermediate Algebra		Geometry	Pre-AP Geometry	Algebra 2	PreAP Algebra 2 with Trigonometry
Grade 10	Conceptual Geometry	*Geometry	Pre-AP Geometry	Algebra 2	PreAP Algebra 2 with Trig	AP Pre Calculus OR Analysis	
Grade 11	Conceptual Algebra 2	Algebra 2	PreAP Algebra 2 with Trigonometry	**AP PreCalculus OR Analysis OR AP Statistics OR CIS: College Algebra		**AP Calculus AB or AP Statistics	
Grade 12	Analysis OR CE Math for Trades OR AP Statistics OR CIS College Algebra			AP Calculus AB OR AP Pre Calculus OR Analysis OR AP Statistics OR CIS: College Algebra		**AP Calculus BC or AP Calculus AB or AP Statistics	

Intro to Computer Science, AP Computer Science Principles and AP Computer Science A are also available

Additional course options in special education are available as designed by the IEP process.

Additional course options are available for English Language Learners as provided by the English Language Learner

Revised and Updated Annually
Most Recent Revision, 9/2025

Program.

**** Students need to take PreAP Algebra 2 with Trigonometry before AP Pre Calculus**

Careful consideration should be given to the math course and pathway chosen. It is important to review the math pathways from middle school through high school and keep in mind the impact of the choices that are made. The following are some commonly asked questions that can help guide decision making.

What are the graduation requirements related to math?

What does a student need to be college ready in math?

When is acceleration possible?

What does double accelerated mean?

What considerations should be made in choosing acceleration?

How does a student enter into an accelerated pathway?

Can high school credits be earned in middle school?

If a student completes Intermediate Algebra and Geometry in the middle school what does that mean?

Does a student need to accelerate in order to take AP Calculus before they graduate high school?

What college level coursework is available at the high school in the area of math?

What are the graduation requirements related to math?

In order to graduate from any high school in the state of Minnesota, students need to earn 3 credits of math and complete Algebra 2. In School District 197, the 3 credits are generally Intermediate Algebra, Geometry and Algebra 2.

What does a student need to be college ready in math?

Students pursuing post-secondary education will need anywhere from 3 - 4 years of math. The table below summarizes the requirements at various post-secondary institutions.

Requirement	Community & Technical College	Moderately Selective College	Selective College	Very Selective College	Extremely Selective College
Example Schools	Inver Hills, Century, Dakota Technical	Bethel, MN State Universities, NDSU, UMD, UND	Gustavus, Beloit, UW-LaCrosse, Hamline, UW-Eau Claire, St. Thomas	UW-Madison,U of M - Twin Cities, St. Olaf, Lawrence	Harvard, Stanford, Amherst, Pomona, Carleton
Math	No specific coursework required. Students should be on track for high school graduation and students should take the most difficult classes they can succeed in to prepare for college-level courses.	3 years including Intermediate Algebra, Geometry and Algebra II	4 years including Intermediate Algebra, Geometry and Algebra II	4 years including Intermediate Algebra, Geometry and Algebra II	4 years including Intermediate Algebra, Geometry and Algebra II

When is acceleration possible?

Beginning in grade 5, students can accelerate in math into what is referred to as a double accelerated pathway. Students in grades 6 may move into this pathway through the subject acceleration process, however the most common acceleration occurs in grades 5 and 7.

Students can move into a single accelerated pathway in grade 7 if they meet entrance criteria..

Students can double up on high school courses in grade 9 or 10 by taking Geometry at the same time as Intermediate Algebra.

Revised and Updated Annually
Most Recent Revision, 9/2025

What does double accelerated mean?

Students that enter into the double accelerated pathway skip grade 5 completely and enter into a 2 year course sequence that compacts grade 6, 7 and 8 math standards into 2 years. Students entering this pathway, most demonstrate proficiency on the 5th grade math standards as part of the subject acceleration process.

What considerations should be made in choosing acceleration?

The following questions will help a student consider whether acceleration is right for them.

- Is the student performing at grade level?
  This can be measured in a variety of ways: proficiency on MCA, at grade level target on aMath (FAST) passing grade level math course and or assessments.
  Students should be achieving above grade level if choosing acceleration.
- Does the student like to be challenged? solve problems? work at a quicker pace?
  Courses in the accelerated pathways move much more quickly, cover more content than a traditional course and cover content at least 1 grade level ahead.
- Does the student have the time and work habits to complete regular daily homework assignments?
  Daily homework is a common expectation in all accelerated courses.
- Does the student advocate for themselves when they need assistance?
  Students will need to advocate for themself when they need assistance.

How does a student enter into an accelerated pathway?

A student entering grades 5 or 6 would apply for acceleration following the district's Single Subject Acceleration procedure by June 1.

High achieving students in grade 4 will complete an end of course assessment in mid-May that can help guide families' decision in this process.

Can high school credits be earned in middle school?

The high school courses of Intermediate Algebra and Enriched Geometry are offered at both middle schools for students in the accelerated math pathway.

Revised and Updated Annually
Most Recent Revision, 9/2025

These classes are offered at the middle school and are taught by a middle school teacher. The curriculum, scope and sequence and assessments used are the same as what is used at the high school. Middle school and high school teachers regularly collaborate.

Middle School students can earn high school credit for these courses upon successful completion. The letter grade earned in these courses will appear on the high school transcript but is NOT calculated into the high school GPA. The goal is to provide students the opportunity to try out a high school course in an environment with lower risks.

If a student completes Intermediate Algebra and Geometry in the middle school what does that mean?

In order to graduate a student would only need to complete Algebra 2 in high school and could theoretically be done with their high school math courses at the end of ninth grade. However, most colleges want to see student enrolled in math courses through their senior year.

If a student accelerates in Middle School they will need to take upper level courses in high school (such as an PreCalculus, an Advanced Placement course, College In the Schools College Algebra) to meet college recommendations of completing four years of math in high school.

Does a student need to accelerate in order to take AP Calculus before they graduate high school?

Students who want to take AP Calculus in high school, can reach this course in three different ways:

- Follow double acceleration pathway
- Follow single acceleration pathway
- Double up in math during 9th or 10th grade by taking Geometry the same year as either Intermediate Algebra or Algebra 2.

What college level coursework is available at the high school in the area of math?

Four college courses are available in math at Henry Sibley: Advanced Placement Calculus AB, Advanced Placement Calculus BC, Advanced Placement Statistics and College In the Schools College Algebra. In addition to these courses, students could opt to enroll in Post-Secondary Enrollment Options through any of the approved post-secondary institutions in Minnesota.

Advanced Placement (AP) courses are sponsored by the College Board and are the equivalent to what one would experience at the Freshman level of college. AP courses are more demanding

than other high school classes. In May, students enrolled in an AP class take a test that may earn them college credit depending on the score. While the amount and type of credit one receives may differ among colleges, most will allow a student to skip basic courses and, depending on the amount of AP courses taken, enable one to begin as a sophomore. Colleges and Universities look favorably upon students who have challenged themselves and done well in AP coursework.

College in the Schools (CIS) and Concurrent Enrollment (CE) courses are taken at Henry Sibley with a teacher, but results in high school and college credit upon completion. College in the Schools (CIS) is a concurrent enrollment partnership between the University of Minnesota-Twin Cities and School District 197.

Post-Secondary Enrollment Options (PSEO) is a program that allows students in grades 10-12 to earn college credit while still in high school, through enrollment and successful completion of college-level courses. With traditional PSEO, these courses are generally offered on the campus of the postsecondary institution; some courses are offered online. The purpose of this program is to promote rigorous educational pursuits and to provide students with a wider variety of academic options. A student who takes college or technical courses for high school credit will have the cost of tuition, books, and materials paid for by the State of Minnesota.

Most PSEO courses are only open to High School students during their Junior and Senior year, with each participating college and university setting their own requirements for enrollment into the PSEO courses and programs. Students may take PSEO courses on a full- or part-time basis, beginning in their Junior year of High School. For full-time PSEO students who begin in their Junior year, it is possible to graduate from High School with enough college credits for an Associate's Degree. Not all Minnesota colleges offer PSEO, for a complete list of colleges that do, view this list provided by the Minnesota Department of Education, CLICK HERE. A student must apply and be accepted at the college where they want to take PSEO classes at.

What math intervention options exist for students?

Math intervention is available in grades 5-9. Students who are not performing at grade level in classroom work and on recent MCA (Minnesota Comprehensive Assessment will be recommended for intervention. Students who are recommended for intervention will be enrolled in their regular grade level course along with their intervention class. This class will take the place of a specialist.