Frequently Asked Questions
Georgia Performance Standards in Mathematics

In fall 2005, schools throughout Georgia began implementing a new mathematics curriculum, the Georgia Performance Standards (GPS) for Mathematics. These standards were developed by master classroom teachers, district and regional mathematics leaders, and university faculty to lay a foundation for a more advanced mathematics education than that previously provided to Georgia students. When Georgia began its curriculum revision, it looked to those countries that had the highest student performance on international assessments for mathematics. Those countries with the highest student achievement in mathematics typically use a mathematics curriculum that integrates topics like algebra, geometry and statistics, making mathematics easier to understand and apply. Our new curriculum, the Georgia Performance Standards (GPS), follows that same approach. As with any new effort, questions have arisen about the changes we all face as we strive to implement a more rigorous and challenging mathematics program. The following questions are those most frequently asked about our middle and high school mathematics curriculum. If you have additional questions, please send them to math@doe.k12.ga.us.

Why do we need a new mathematics curriculum?
In achievement test comparisons, students in the United States rank lower than those in other nations. Higher scoring countries typically use a mathematics curriculum that integrates topics like algebra, geometry and statistics, making mathematics easier to understand and apply. Our new curriculum, the Georgia Performance Standards (GPS), follows that same approach. When completely implemented, students will be better prepared mathematically.

Who developed the new curriculum?
The GPS was developed by teachers, administrators and representatives from higher education, business and the community. After public input and revisions, it was approved by the State Board of Education in 2005.

When will the new curriculum begin?
The new mathematics GPS is being phased in over a multi-year period. Grade 6 was implemented in 2005; K-2 and 7 in 2006; grades 3-5 and 8 in 2007; and grades 9-12 during 2008-2011.

Will there be textbooks for the new curriculum?
Although our textbooks never completely align with our curriculum, there are textbooks available that contain much of the content in our new integrated mathematics standards. Additional resources are available to supplement textbooks. The purchase and distribution of textbooks is a local decision made by the individual school district.

What about the old courses like Algebra I and Geometry?
Because algebra, geometry and statistics topics are integrated in the new mathematics courses, the names of the old courses no longer describe what is being taught. The names of the high school courses changed to match the content. Mathematics I: Algebra / Geometry / Statistics or Accelerated Mathematics I: Geometry / Algebra II / Statistics, for example, will be the courses most students take during their ninth grade year.

Are these courses similar to the courses, with the same names, recently dropped by the state of New York?
No. New York did not provide their districts with a specific set of grade-level standards but rather a "Test A" and "Test B", which systems could address by choosing curricula of their choice. Georgia's new standards set forth very specific grade-level content. Not only are the courses rigorous, but along with grade-level frameworks, videos, webcasts and other resources, they will provide very clear expectations for students, and instructional guidelines for teachers.

Why are the high school courses named Mathematics I, II, III, and IV? Will my child still learn algebra and geometry?
The challenging mathematics offered in grades six through twelve will include all of the concepts and skills previously taught in traditional Algebra I, Algebra II, Geometry and Pre-calculus courses. The new course names reflect a more integrated, problem-solving, real-world approach to mathematics. Students should understand why they are learning mathematics and how it is used in other disciplines and in their own areas of interest. Each of the required mathematics courses will include topics in algebra, geometry, number sense, and statistics in a format that encourages mathematical reasoning and understanding, competency in skills and procedures, and the use of appropriate technology.

How are the GPS mathematics courses in middle school different from those taught under the old curriculum?
Courses previously taught in grades 6-8, were extremely repetitious, addressing almost the same content in all three grades. Expectations for student learning were not clear and in most cases, demanded only low-level cognitive skills. Under the new GPS, by the time a student has finished 8th grade, they should have learned 80% of the concepts and skills previously taught in Algebra 1, 50% of the content traditionally taught in high school geometry, and a significant amount of statistics and probability previously taught in high school courses. The new standards require that students think critically, apply the mathematics they are learning in problem-solving situations, and communicate their work.

Will middle schools still offer high school credit courses?
Middle schools can continue to offer accelerated courses and high school Carnegie credit for students who have the prerequisite skills, including honors and gifted. Carnegie course names will transition along with the high school phase-in. Eighth grade students will continue to take the CRCT which is aligned to the eighth grade GPS.

Can students still take Advanced Placement classes?
Students are encouraged to take AP classes. The new Georgia Performance Standards are designed to help prepare more students to be successful in higher-level courses, including Advanced Placement and International Baccalaureate.

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Must the new mathematics courses be taken in sequential order? Will students be allowed to take two mathematics courses concurrently?
The content taught in Mathematics I through Mathematics IV and Accelerated Mathematics I through Accelerated Mathematics III is sequential. However, students will have a variety of options for the fourth year of mathematics, including Mathematics IV, Discrete Mathematics, AP Statistics, AP Calculus AB, AP Calculus BC, and courses in applied mathematics related to specific, career-oriented fields of study. After Mathematics II or Accelerated Mathematics II, students may choose to take Discrete Mathematics or AP Statistics while taking any higher level course.

Will colleges and universities accept the new courses for credit? Will my child be prepared for college mathematics?
The changes in the Georgia mathematics curriculum have been strongly endorsed by faculty from the major colleges and universities in the state, including Georgia Tech, Georgia State University, and the University of Georgia. The content and philosophy of the curriculum are consistent with current recommendations of leading national and international mathematics educators and organizations. Colleges and universities throughout the United States are aware of and, in most cases, promoting these kinds of changes.

How will colleges know about these new courses?
Beginning in 2008, there will be a new graduation rule for incoming freshmen. Under the new rule, the new courses will appear on the transcripts of ninth grade students. In-state and out-of-state colleges and universities will be made aware of the new course content and names during the transition. By 2011 all transcripts going to postsecondary institutions will contain the names of the new courses.

What about students who transfer to Georgia high schools after 2008?
Transfer students will take an assessment designed by the Georgia Department of Education. The results of this assessment will be used to construct a self-paced online program of study to supplement coursework in the Georgia Performance Standards (GPS). Students will only be required to complete prerequisite mathematics content not yet mastered.

How are we going to address the needs of struggling students within the mathematics classroom?
A new Mathematics Support course will be available to high school students starting in the 2007-2008 school year. This course is being added to give high schools an opportunity to put students in a companion class that will parallel the content being taught in the student's mathematics class. This support class will give struggling students the extra time and attention they need to be successful. The new Mathematics Support course will be taught by a mathematics-certified teacher and should be used as an intervention strategy to help struggling students before they fail. The course should be conducted in a flexible manner that allows for individualized interventions. Students will receive elective credit for this class. Schools are advised to monitor students' mathematics scores (especially incoming freshmen) and assign students to this Mathematics Support course as a preventive measure.

What will happen to End-of-Course Tests (EOCT)?
Students currently take an EOCT after completion of Algebra I and Geometry. Students will take a comprehensive EOCT at the end of Mathematics I or Accelerated Mathematics I and at the end of Mathematics II or Accelerated Mathematics II.

How will the Georgia High School Graduation Test (GHSGT) be affected by the new high school courses?
Students entering Georgia high schools as freshmen in 2008 will be assessed under the new Georgia Performance Standards on the GHSGT. When this group of students takes the GHSGT in 2011, the test will assess the new content standards. The EOCT for Mathematics I/Accelerated Mathematics I and Mathematics II/Accelerated Mathematics II will be used as predictors of success on the GHSGT, thus providing opportunities for intervention strategies prior to taking the GHSGT.

Where can I get more information about the new Georgia mathematics curriculum?
More information on the mathematics in the Georgia Performance Standards can be found at the website www.georgiastandards.org. Under the Mathematics section, you will find standards for each course, which provide detailed information about what students will be expected to know and be able to do at each grade level. In the Mathematics Frameworks section, you will find sample tasks that provide guidance to teachers and students.

How are the needs of gifted students being addressed within the mathematics classroom?
The Georgia Department of Education respects the right of local school systems to determine how to best meet gifted and talented students' advanced learning needs. The local education agency (LEA) may designate a particular SBOE-approved course as service to gifted students based on the modifications the system implements to the basic curriculum for that course. The core content class in which gifted students participate should be modified significantly from the one that more typical students at that grade level would take. A course description should address the GPS standards and show how the course has been modified in terms of content, pacing, process skills emphasis, and expectation of student outcomes. Local school systems may elect to include high-achieving students who have not met state gifted program eligibility criteria, but who have demonstrated the academic ability and motivation to be successful in a high-level class in that particular content area. Further, LEAs may also provide guidance within their respective system to accelerate instruction for mathematically talented students. These recommendations are aligned with the National Council of Teachers of Mathematics teaching and learning strategies, which include the following:

- Nurturing higher-order thinking through open-ended investigations,
- Requiring students to communicate effectively,
- Focusing on problem-solving,
- Including application of mathematics to real-life situations, and
- Encouraging experimentation, connecting mathematics to other subject areas.

What do parents need to do?

Educators throughout Georgia are working diligently to provide quality mathematics instruction that will prepare students for life in a world that is increasingly dependent on mathematical reasoning, problem solving, and technology. Parents also have a vital role to play and are encouraged to talk with their child about the mathematics he or she is learning in school. Parents and students should discuss the tasks given to students and how the mathematics involved relates to the world in which we live. Parents are also encouraged to speak with teachers and administrators in the local district regarding how the GPS is being implemented. As we strive to raise the mathematical and statistical literacy of all Georgia students, nothing is more important than a strong partnership between educators and parents that support student learning in the mathematics classroom and beyond.