

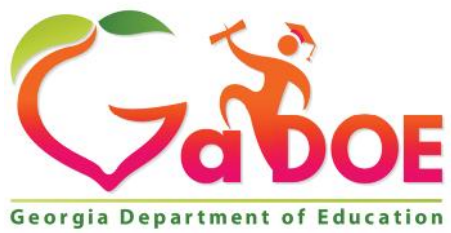
Richard Woods, Georgia's School Superintendent
"Educating Georgia's Future"

Geometry Standards Survey Rating and Comments

Please indicate your level of agreement with the following statements about the Geometry Standards.

The DRAFT Geometry Standards:

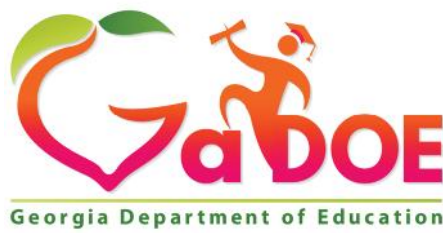
	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know	# of Responses
are clear and understandable	26.1% 43	58.8% 97	12.1% 20	1.8% 3	1.2% 2	165
define what students should know and be able to do to prepare them for success in required high school mathematics courses	26.1% 43	60.0% 99	10.3% 17	2.4% 4	1.2% 2	165
are appropriate for the next level or grade in preparation for college and career readiness	28.0% 46	53.7% 88	11.0% 18	2.4% 4	4.9% 8	164
are rigorous enough to challenge learners	37.8% 62	56.1% 92	3.7% 6	0.0% 0	2.4% 4	164
provide sufficient opportunity to revisit and enhance student understanding of foundational algebra concepts	31.1% 51	50.0% 82	11.0% 18	3.7% 6	4.3% 7	164
are consistent with postsecondary and business/industry standards	25.0% 41	55.5% 91	7.3% 12	3.7% 6	8.5% 14	164



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Please enter any additional comments you would like to make concerning the DRAFT Geometry Standards.

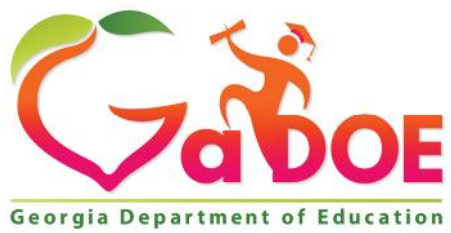
Comments:
Appropriate for 3rd year emotionally and academically prepared Math students.
As a teacher and a parent in the state of Georgia, the integrated curriculum is not working for these students. We have to touch on so many different things during the year that the students never fully grasp the concept of the material that is being taught. Going back to traditional coverage will allow the students to have a better understanding of the material before moving on to the next course.
As a teacher who has taught QCC, GPS, and now CCGPS, I feel that GPE1 and GPE2 belong in a future course. In fact, I think that Conic Sections period belong in Advanced Algebra and not in Pre-Calculus. Things are too scattered. It will be hard for kids to make connections with conic sections if you teach two of the conics in Geometry and the other two in Pre-Calculus. Why not consider teaching all 4 in Advanced Algebra so that you can go deep and compare and contrast the conics? Conics fit perfect when we had that in Algebra II in QCC Land and Math III in GPS Land. Students had the proper background. If you are going to do this, I would suggest moving the completing the square method of solving quadratics from your proposed Algebra I standards to Advanced Algebra where you could teach this first before students could start creating equations in standard form for the Conics.
As long as these standards match up to what the students are expected to do in college, then they are fine.
Being both an experienced teacher and parent, I have witnessed the stress and confusion of many students, teachers, and parents over the last several years of constantly changing math courses, names, and sequences. Local school boards should be given the option to choose the traditional course sequence.
Conic sections used to be part of Advanced Algebra and should still be taught to juniors rather than sophomores.
Conics with the parabolas should be in Advanced Algebra instead of Geometry. Hope we go back to the more traditional Geometry. The integrated experiment has been a disservice to the students and teachers. Go to Geometry, get textbooks and stay with it so we can get rigor back into the Math class in a reasonable way. Mile wide inch deep is a failure.
Courses in Georgia continue to be drafted and implemented for remediation purposes. Has anyone studied the number of remedial courses offered at 2-year colleges? This semester I'm teaching Geometry A to a class of 32 students, more than half have failed this course at least once. Two seniors are enrolled. Students taking the course for the first time failed the prerequisite course at least once. What's wrong with this picture? I don't see the math difficulties that were addressed years ago improving...is anyone taking my concerns and comments seriously?
Draft Geometry look good. This new path will give teacher enough time to cover all units without rushing.
Finally.



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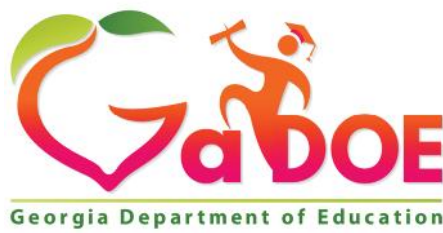
<p>Finally...standards that are clear! The old standards were ambiguous (and had room for lots of interpretation). If these standards are adopted, teachers will now know exactly what they should be teaching!!</p>
<p>Geometry has been taught for decades. I hope these standards are the most logical in sequence and someone compared them to many other schools' Geometry curriculum! Why reinvent a course that should be standardized? Better yet, find a good text book about Geometry and copy the book's (and math experts) sequence of learning objectives and teach that! Please provide these books for our students in Fulton County!</p>
<p>Geometry is a course that is learned and developed with time as students discover the relationship between early and later content. I believe this will allow them the opportunity to better grasp spatial concepts than in some of the previous courses.</p>
<p>GPE.1, GPE.2: These standards don't seem to fit in Geometry. I think they belong with the rest of the conics sections in a later course. MG.1, MG.2: seem to fit better in a later course as well. I am pleased with the way the standards are worded. They seem clearer. I hope I will be more aware of what they mean and what to expect from my students.</p>
<p>How many jobs would Geometry classes prepare students for in the "real" world? Wouldn't it be better to just integrate Geometry with one of the Algebra classes?</p>
<p>I always felt like placing Geometry between the two algebra courses was odd, but it did make more sense when I was in school because of the varying tracks students could take (which was not a bad way to go especially with all the differentiation teachers are supposed to do and would be helpful if students/parents could differentiate their course selection). Now, though, with all students being expected to have specific math courses, why keep geometry in the middle. Wouldn't math flow better if the two algebra courses followed each other?</p>
<p>I am glad this course will be an option.</p>
<p>I am not sure the standards prepare students for anything except college level courses and college level problem solving.</p>
<p>I am very pleased to see these three options being offered. Many 9th grade students need more support to build number sense and an understanding of operations in algebra, and Algebra I should focus on this. Specifically, I am glad to see the simple calculation topics like transformations moved to geometry. Algebra I should have a focus on the operations and their role in simplifying expressions and solving equations.</p>
<p>I believe focusing on a discrete area of mathematics allows for a deeper understanding of that content, rather than skimming many domains for coverage.</p>
<p>I believe the standards for the course is about the same and the students will be able to accomplish completing these standards.</p>
<p>I believe we should remove Standards GPE.1 and GPE.2, to be placed with the other conics standards. MG.1 and MG.2 should also be removed from the Geometry course and placed in more appropriate modeling courses. I truly believe that to fully understand the standards, students may need a year and a half to study the current standards.</p>



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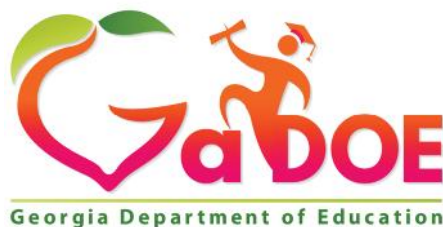
<p>I DO NOT agree to have districts choosing between discrete or integrated. We need consistency! This is going to be a huge mess when students transfer between districts. The vote was 85% in favor of discrete what happened?</p>
<p>I do not understand why there are statistics standards in a discrete Geometry course. I think they should be shifted over to the course called statistics. They do not belong in Geometry. Period.</p>
<p>I feel that there are too many standards to cover at an in-depth level in one year. I feel the following standards should be moved to being taught with other conic sections: GPE.1 and GPE.2. I do not feel that MG.1 and MG.2 fit in with this course, and would be more appropriate in the modeling unit in Advances Algebra.</p>
<p>I feel the trigonometry should be removed so that teachers could do more in-depth study of relationships among the different functions and graphs. Leave the unit circle, trig graphs, and identities for a pre-calculus class.</p>
<p>I like Option 1 for the Math Courses to take in High School. This is what I took back in the 70's and it has served me well. Traditional math and teaching students how to think and solve problems is very important! It is also a lot easier to understand when the courses are not Integrated.</p>
<p>I like this.</p>
<p>I think putting all geometry standards together and all algebra standards together will be helpful in developing the needed skills for students to be successful in Advanced Algebra.</p>
<p>I think that these standards represent a much more reasonable amount of content to cover thoroughly in a school year. It is also good to see that the standards are now more related to each other rather than having multiple areas of mathematics crammed into a single course.</p>
<p>I think that those of us who understand the standards and how they are connected to each other can teach them in just about any order. What we want is for these courses/standards to STOP CHANGING! We really cannot truly tell how students are progressing because we are having to compare apples to oranges every other year so it seems. Teachers have not adjusted to the new courses because they are still trying to use old, outdated methodologies that are not meeting the needs of our students. Instead of changing the courses, let's add some rigorous professional development. If we change the expectation of the way we teach mathematics, it will definitely have a greater impact on the way students learn and progress.</p>
<p>I think the Geometry standards ask too much of our regular ed students and there is too much content to teach in the amount of time given to teach the material.</p>
<p>I think the traditional way of teaching is more effective. Not including the algebra and probability in the standards will make the impact of the geometry taught more meaningful.</p>
<p>I think these standards work.</p>



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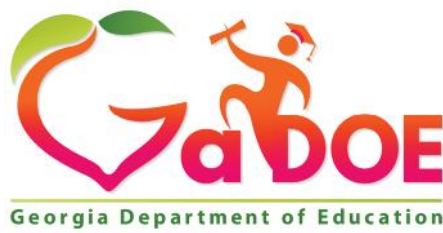
<p>I would like the standards to address how to deal with students who have deficits in basic math skills such as multiplication and division. Also, if the whole class fails a unit, what happens? Currently, the teacher offers a recovery process after the unit test. She teaches nothing. She just let's them learn how to cheat by taking and retaking an online assessment up to five times. Their grade can be raised in her grade book by learning the process of elimination in the recovery process, but none of the class learned the concepts in the unit.</p>
<p>I would like to see an example provided for Geometry MCC9-12.G.GPE.6. This cannot be called Discrete Geometry considering that we are still including Statistics standards. However, I understand that it is not integrated either. The subtraction of a few standards from the integrated tenth grade course does not make this course discrete. I am glad that they removed S.CP.8 as well as G.SRT.9-11 as recommended in the previous survey. The Foundations of Algebra looks great for those that cannot handle AMDM or Pre-Calculus senior year. However, how does this affect graduation and subsequent post-secondary admittance? We need clear guidelines on this. The creation of the EOC tests needs to be completed in a timely enough manner so that teachers get study guides and sample questions--well before the test is administered.</p>
<p>I would like to see the conics section in the third year of math, not with Geometry.</p>
<p>If possible I would like to see the following standard moved to a later course to teach all of the conics together. MCC9 - 12.G.GPE.2 Derive the equation of a parabola given a focus and directrix. Also, you may want to move the quadratic unit back into this course and take it out of the Algebra 1 course. The Algebra 1 course has too many standards. Thank you for all that you do.</p>
<p>If the class is Geometry, then why are students studying typically algebra concepts such as complex numbers, quadratics, and statistics? Too much content for support children to learn in a short amount of time.</p>
<p>If this course is designed for students who were struggling and are more of the applied/remedial type of student who will not be going to college, I believe that there could be less proofs required, similar to the Informal Geometry class that schools used to offer.</p>
<p>If we are making a wholesale return to traditional rather than integrated math courses, I think this course is reasonable, appropriate, and desirable. As I expressed at length in my comments regarding the Algebra I course, my larger concern is the coherence of our high school mathematics curriculum and the provision for different levels of performance. Just changing course names and restacking standards isn't going to full address the underlying issues.</p>
<p>Keep Geometry in one class and stop throwing it into all classes. The scattering of topics through out the other classes is not helping the students understand Geometry. They cannot relate one topic to another with things scattered into different classes. Go back to just teaching Geometry.</p>
<p>Let geometry be geometry and put algebra standards in algebra!!!</p>
<p>Make sure that all Special Educations students have a clear path for graduation at every level.</p>
<p>MG #1 and MG #2 do not meet standards and should be removed.</p>



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<p>Most of the Geometry standards ask students to prove. Because Geometry is so scattered before students get to Geometry, they do not have a strong enough basis of the properties they need to know before they have to prove. Students need to be able to develop the concepts before having to prove them. I do like that the standards are more clear and easier to read. There is also not enough time to properly teach the content to where students understand the content fully. I also feel that GPE.1 and GPE.2 should be moved to a later course to be taught with all other conics. MG.1 and MG.2 should be moved to the modeling unit in Advanced Algebra.</p>
<p>Most of the standards are very clear. A few on circles could use additional definition as to what exactly is expected.</p>
<p>Move the conic sections of circles and parabolas to Advanced Algebra. This information should not be a separated or chunked standard! We strongly believe these standards should be together representing all the ways to slice a cone.</p>
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<p>One or more job descriptions for each chapter!</p>
<p>Please continue to move backwards towards the old math standards (you know the one from 10 years ago that worked and made sense.... when subjects weren't disjointed facts).</p>
<p>Please decide traditional vs integrated for the entire state! One-in-six students transfer schools each year! Having different schools on different math tracks with continue to make things difficult. Sure, some people will be angry, but we must do what is best for kids!</p>
<p>PLEASE let us teach using the Discrete Model.</p>
<p>Please move the conic sections of circles and parabolas to Advanced Algebra. We believe that this information should not be separated. We believe these standards should be together representing all the ways to slice a cone.</p>
<p>Please remove GPE.1, GPE.2, MG.1, and MG.2.</p>
<p>Remove the following standards. These standards should be grouped with other conics. MCC9-12.G.GPE.1 Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation. MCC9-12.G.GPE.2 Derive the equation of a parabola given a focus and directrix.</p>
<p>Some standards seem unnecessary, specifically, MCC9-12.G.GPE.6 (partitioning a line), MCC9-12.G.GMD.1, 2 (Cavalieri's principle). Concept of radians should be introduced at the appropriate time that it will be used...with advanced trig topics. Higher-level statistics and probability concepts should be included in a separate course.</p>



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Standards are not always clear. For example, one or more standards say "Prove theorems about triangles. Theorems include....." Why not state exactly which theorems to prove? "Theorems include" leaves the reader/teacher believing there could be others assessed on the EOC. Second issue is that there is no need for Statistics and Probability to be included in a Geometry course. Tell the public that the course is still integrated and quit trying to trick them into believing that we've gone back to the days of Alg I, Geom, Alg II. Or take out the Statistics and Probability. Ridiculous. Period.

Take out the statistics and probability.

Thank you for putting geometry together again. Students will be able to make stronger connections to the information because there is once again a systematic approach to the presentation of the material.

Thank you, GADOE, for a focus on providing students in GA with different paths to success. Let's keep this going!!!

The accelerated courses are too long for one semester.

The following standards should be combined with the other conic sections (hyperbola and ellipse), taught in the 3rd year of math (algebra II or advanced algebra): MCC9-12.G.GPE.1 Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation. MCC9-12.G.GPE.2 Derive the equation of a parabola given a focus and directrix.

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The following standards should be combined with the similar standards with the other conic sections (hyperbola and ellipses) in the third year course: Translate between the geometric description and the equation for a conic section: MCC9-12.G.GPE.1 Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation. MCC9-12.G.GPE.2 Derive the equation of a parabola given a focus and directrix.

The following two standards NEED to be combined with a FULL conic representation with hyperbolas and ellipses. Whether it is combined in Geometry or the third level where hyperbolas and ellipses are now. It doesn't matter. Translate between the geometric description and the equation for a conic section: MCC9-12.G.GPE.1 Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation. MCC9-12.G.GPE.2 Derive the equation of a parabola given a focus and directrix. As for the amount of content in each class. It is overwhelming and does not allow for a very rich or deep learning of important content. That is disappointing since we have been told for years this transition would lead to more depth and less width of content.

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The geometry needs to be taught in one full year unlike presently taught over three years. The students need the consistency of these standards in one year to fully grasp the concept involved in geometry. Most of the time we have to reteach the previous years geometry because the students don't remember or the teacher didn't cover it well.

The Geometry standards seem appropriate. If these are passed, resources will need to be developed to include algebraic application of these geometric standards so students do not lose their algebraic skills between Algebra I and Advanced Algebra. This (students not applying algebra skills to Geometric problems) was a frequent problem when we taught QCC Algebra I, QCC Geometry, and QCC Algebra II.

The majority is old Geometry, which is good.

The previous number of standards for 10th grade was excessive. This is much more appropriate and more logical for the student and the teacher.

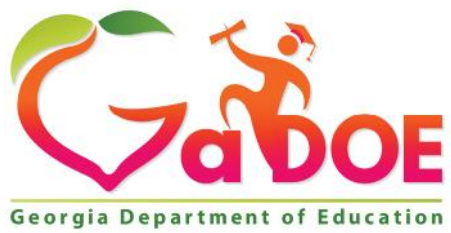
The stand-alone Geometry course (the word "discrete" has a specific meaning in mathematics, so its use here is confusing) is certainly preferable to the integrated courses. It would be even better if the entire year was devoted to Geometry topics, but I supposed probability had to be squeezed in somewhere. As far as clarity, again, it is better than the current standards, but the CCGPS standards are still not logically organized from a teacher's perspective. The old QCC standards were more logical as they were organized by skill progression, so teachers could actually plan their calendars based on the standards.

The standards G.GPE.1, G.GPE.2, and G.GPE.3 should be moved to the Advanced Algebra/Algebra 2 course where the remainder of conics will be learned. This course is FULL already and does not need these standards. Also, G.MG.1, G.MG.2 and G.MG.3 should be moved to the Advanced Algebra/Algebra 2 course as well for age appropriateness. The course is FULL it will have plenty in it with all of the Geometry plus Data. Please move these standards where they belong. They don't belong in this course for tenth graders.

The standards have been simply pulled from the current common core standards. We currently teach these standards along with about a semester of algebra standards. How is it any better to just cut the standards in half? Why not remove the algebra standards AND add enriching standards to geometry that include all points of concurrency, area of polygons, a unit for surface area and volume, a unit for parallel and perpendicular lines, a basic geometry unit and a unit for reasoning and proofs all by itself? Students are not able to connect the current standards because we are not teaching basics because they are not in the standards

There are far too many standards for Geometry to be covered in one year. They are very in depth standards that the students need more time to work through in order to succeed.

There seems to be too many standards in this course. Take out the Statistics and Probability content.... it does not relate to Geometry. Let those concepts be covered in the later math course or in college.



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These are the skills my higher-level students are missing as a result of the GPS and CCGPS curricula. Thank you!!! I would leave out the "modeling with Geometry" standards. That can be covered in a higher-level math course. What about "honors" versions of these courses instead of another "accelerated" track? Due to the structure of the accelerated track, students are not able to move into "honors" math courses unless they were there from day 1. Some students end up in regular math classes due to poor registration practices and then are later recommended for honors math. With the accelerated tracking, they are left out. A kid should be able to move into Honors Geometry after excelling in an Algebra 1 course.

These standards are much more suitable to a year long course. The students will have much more time to understand the material thoroughly without feeling rushed.

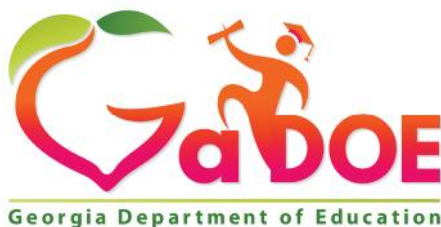
These standards need to be combined with the other conic sections i.e., hyperbola and ellipses. Translate between the geometric description and the equation for a conic section: MCC9-12.G.GPE.1 Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation. MCC9-12.G.GPE.2 Derive the equation of a parabola given a focus and directrix.

These standards need to be taught with the other conic sections such as hyperbola: MCC9-12.G.GPE.1 Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation. MCC9-12.G.GPE.2 Derive the equation of a parabola given a focus and directrix.

These standards should be combined with the conics section. Translate between the geometric description and the equation for a conic section: MCC9-12.G.GPE.1 Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation. MCC9-12.G.GPE.2 Derive the equation of a parabola given a focus and directrix.

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This is a general comment not specific to the math standards. Georgia middle and high schools need to be reinvented from the ground up. The vast majority of students leave school unprepared for work or higher education. First, many (20-30%) drop out with no skills. Next, many actually graduate with a diploma, but really have no marketable skills. A large percentage of those who go on to college or tech school are unprepared and never complete a degree. Even those who complete a degree are often lacking the hard and soft skills employers demand. All in all, just look at the examples of your friends, neighbors, and relatives and you will see my point here. Georgia needs to reinvent education grades 6-16 into a comprehensive, sequenced 6, 8, and 10-year program to prepare young people to enter the workforce. Extensive use of practical, hands-on skill development, internships, and apprenticeships should be integral to this approach. Joe Strickland



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<p>This is a step in the right direction. What also needs to change is the state's approach with the Accelerated track. We should go back to the model with the honors level course meant a meatier course instead of a track meet trying to finish the standards. Especially in the 10th grade accelerated, it's nearly impossible to complete the course in the time provided and give students what they need to be successful in Pre-Calculus and beyond.</p>
<p>This is very similar to what we teach now. He is still lacking the influence of proofs and the addition to probability is a little difficult to integrate in Geometry (I like it in Algebra better). Over all very pleased to see the Quadratic unit removed!! :)</p>
<p>This should help students who are in need of extra help.</p>
<p>Too many concepts to teach and it is hard for students to retain all concepts. Transformations are already done in 8th grade. It should not be done in 10th grade. Modeling Geometry should move to 11th grade.</p>
<p>We have lost the beauty and structure of Euclidean Geometry. A great loss.</p>
<p>We need textbooks!!!!!! We need textbooks!!!!!! We need textbooks!!!!!! We need textbooks!!!!!! We need textbooks!!!!!! We need textbooks!!!!!! We need textbooks!!!!!! We need textbooks!!!!!! We need textbooks!!!!!! We need textbooks!!!!!! We need textbooks!!!!!! We need textbooks!!!!!!</p>
<p>Why don't we teach standard deviation instead of just mean absolute deviation? In every other statistics course you are required to use standard deviation, so why isn't it in the standards?</p>
<p>Why is graphing circles from a given equation considered a geometry skill? Conic sections should be moved to Algebra 2. Glad there is more focus on actual geometry topics.</p>
<p>With this course being "lighter", how heavy will advanced algebra become?</p>