

Math 1 Public Comments

Sometimes I think for teachers, the wording of the standards needs to be a little clearer to get a better picture of what the students need to know (exactly).
Consider the notion that Middle School students need to be provided concrete foundational instruction in grades 6 and 7 in order to understand and master Math I. Something that I see not happening.
Need to allow for more real world application to make it relevant to the students.
We need to reorganize the curriculum to focus on traditional concepts - Algebra 1, Geometry, and Algebra 2. Integrated math needs to be eliminated!
All of this is nice when preparing students who might be headed into degree programs that require a great deal of higher level math. The majority of students need only basic understandings of algebra and geometry and basic math concepts and skills that actual citizens will need and use are barely touched on in early grades and quickly forgotten in an attempt to look like we are doing something. The math curriculum is filled with needless knowledge, leading to a higher number of dropouts and frustration among students. What our children need to prepare for real life is neglected in an effort to appear to set a curriculum that really only serves at best 2-3% of students.
Students would benefit more going back to the traditional Algebra, Geometry classes including the Common Core requirements
I feel that there is more of a problem with teachers understanding the expectations of each course and that the revisions make it more clear. Generally, they allow for more depth of study with fewer topics. MY MAIN REQUEST is regarding testing. As a Math Curriculum Coordinator for a middle school, I see approximately 2/3 of my eight grade students taking the Math 1 EOC and also the 8th grade EOG. I feel that this is too much testing on this particular group of students and would like to see the EOC test Math 2 instead. That way, we do not have students taking multiple state-level tests on the same subject area at the end of the school year.
Absolute value functions should be included in the NC Math 1 standards. The function is most closely related to lines and there fore should be included where it is most applicable. I think it is a mistake to introduce exponentials in NC Math 1 and then do nothing with them in NC Math 2. I believe we should move those to NC Math 2 and push the geometry down to NC Math 1. As the resources in the publishing world are highly limited for organizing mathematics in this fashion, I believe the state should provide a ton of worksheets, printed notes, and assessments that can be used by teachers. The new math sequencing and lack of textbook type resources for teachers have left many of us exhausted and drained just trying to create paper items for our students to have.
Current content is way too much for block scheduling in one semester. The new revisions will allow content to be covered and reviewed adequately before testing.
Still too much material in Math 1 as a whole.
State approved MATH option for students who can not meet higher standards of Geometry and Functions NOT a FACS class.
I am so glad to see matrices back in the curriculum!
Every student is NOT college bound--this needs to be taken into consideration.
I feel that the NC Math 1 Revisions will be the best for Math 1. There is more clarity and less confusion with the revised Math 1 Standards.
the organization of Math 1 is detrimental to building foundational skills for upper level mathematics classes such as PreCalculus, AP Calculus, and AP Statistics

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I can not see the draft to review it again. Everything seems confusion at this time. The notes the teachers provided seemed helpful and informative to readjust the curriculum. The question is Will the state test reflect these changes?

Matrices should be in Math 1.

I do not like Math 1, 2, 3. I believe we are doing students a disservice in AP courses, on the SAT, ACT, and in college by eliminating a focused Geometry course. I believe we are also doing students a disservice by taking away teachers that specialize in certain areas. Try as we may, not all math teachers are phenomenal at every level of math. I, for one, do not like and am not very good at statistics. This "integrated" approach has forced me to teach it. My students are not getting as good of a foundation, in that area, as the students that have a teacher that enjoys and is good at statistics. I love and am good at teaching Geometry. My students always excelled on the Geometry EOC. However, many teachers do not like and are not as good at teaching Geometry. Those students are not getting as good of a foundation in Geometry as they could be getting. In addition, the test is ridiculous - the multi-level questions make it difficult for an honors level student and impossible for standard and EC! I am in my 15th year of teaching. From year 1, my students (EC, standard, and honors levels) all achieved 80%+ in proficiency on Algebra 1, Geometry, and Algebra 2 EOCs, and these were actually legitimate scores. Now, I can barely achieve proficiency in my honors courses, and that is with a ridiculous curve. What changed here? My teaching? My ability to teach? My students ability to learn? NO! The courses and the test changed making it next to impossible for my current students to learn and retain the amount of material that my former students were able to with ease and accuracy. What is the point of the multi-level questions anyway? Who are we trying to impress? How are teachers supposed to adjust instruction based on test score results? How do we know which one of the 5 concepts in 1 question is causing difficulty for our students? What we are doing in our state is "dumbing" kids down and making NC students look like idiots when they go to college and/or travel to another state to attend public school! It is so sad, and honestly it makes me not want to teach math anymore.

Curriculum still needs revisions

There needs to be a different track for many students who struggle to understand & remember algebra, geometry & especially trigonometry concepts. Many of these students attend community college, join the military or begin a career after high school graduation, so being prepared with Math class credits for entry to a 4 year university is too difficult & not necessary. They often have to repeat Math classes, attend summer school or credit recovery. Why couldn't we make this "community college" track a choice for these students & their parents? Students who have difficulty with Math/Algebra still need basic review & practice on concepts their 9th grade year because they were not introduced to them in middle school. The proposals for Math I are very good for a college bound student.

Everything is so unorganized and scattered out that there is no foundation or building blocks on any topic in the curriculum.

I have noticed that many students do not have basic Arithmetic skill needed to perform at the Math I, II and III level. Students at the Middle School Level need a better foundation.

I really appreciate removing some things from the Math 1 curriculum. This will give me more time to develop exponential and quadratic functions.

Math 1 should concentrate on linear and quadratic functions

Math 1 standards need to address / be modified to ensure that students who are enrolled in the Occupational Course of Study Diploma curriculum can be significantly modified to meet the needs of students at their cognitive ability level and needs.

Return to the traditional progression: Algebra I, Geometry, Algebra II.

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You guys are in a political arena or glass house that either has a lack of withitness at the school and classroom level or is more concerned with what looks good politically. In either case there is nothing in these standards that addresses the root problems in the Sampson County Union District as well as the majority of counties and districts in North Carolina as to why our students perform poorly on these tests based on these standards! These standards are for the most socially economic and educational advantaged group which is in the minority in North Carolina. Let's face the reality of what's going on; we deal with uneducated parents so bogged down with their own problems of life that they miss the mark in stressing the importance of education and the role it plays in their child's life. These standards speak a language that the majority of our parents and students have no concept of. Good luck in your endeavor to make yourself look good politically for the majority!

There is too many standard/concepts in math 1 for our students to master in a semester

Is any consideration being given to revisit the Technical Math curriculum? For many students, the current standards are far too complex and they would be much better prepared for post-secondary life with a greater focus on functional math skills.

Quadratic functions must be removed from Math 1. Math 1 standards are too many. The majority of Math 1 students struggles in Math 1. I really don't see the need to load the Math 1 curriculum with so many standards. In Math 1 students do not need to know how to solve quadratic equations and t apply the concepts of zeros and vertex to word problems. The chair of my department and I have been teaching Math 1 for 3 years, we both agree that students struggle to differentiate when to solve and when to find the maximum in a quadratic application world problem. Have quadratic functions exclusively in Math 2.

No comments for math 1

There is too much bring taught in Math 1. Exponential functions should be introduced in Math 2.

TOO MUCH STANDARDIZED TESTING!!!

Students need to represent data by hand and with technology Students need to learn about correlation not residuals

It would be nice to have ideas about what to teach together especially with Algebra and Functions.

Overall, there are very few critiques I have about the standards. I feel that the revision team did a thorough job of addressing the concerns of the previous standards such as the confusing notes, clarity regarding depth of topics (e.g. quadratics) and the coherency within and between the courses. While not completely thrilled about the amount of quadratics work in Math 1, it is clearer where these ideas stop in Math 1 and pick up in Math 2. A few comments about the standards Number and Quantity Is it expected that students know how to rewrite radical expressions. Specifically, will students need to understand and be fluent in rewriting values such as $\sqrt{75} = 5\sqrt{3}$? This is not addressed in 8th grade as students only evaluate perfect squares and perfect cubes. If this is an expectation, then N-RN.2 needs to reflect that. The revision removed the rewriting of radical expressions. Algebra There is a cluster heading missing. A-APR.3 is included in the cluster Understand the relationship between zeroes and factors of a polynomial. This cluster is used in other courses and appears to be overlooked here.

Why did Matrices move again?

My frustration as an administrator and former high school math teacher, is that each year increasingly more students enter 9th grade deficient in skills. Regardless of the curriuclum changes at the high school level, students must be prepared prior to reaching grade 9. Overall, I think many educators make the mistake of assuming that rigorous instruction demands increasingly difficult content standards. Our current mathematics sequence required for all students is a perfect example of this flawed thinking. If we really want to prepare all students for 21st Century living, then let's require NC Math 1, NC Math 2, a financial literacy math, and a fourth math related to the student's career goals. Thank you for the opportunity to comment.

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<p>The development of area and volume formulas should only be MS if they lead students into the concepts. Older students are more capable of handling questions pertaining to more advanced area and volume formulas.</p>
<p>The revised standards will allow for the course to flow much better and go deeper with important topics.</p>
<p>Limit in Math 1 to understanding functions in general then get specific. A strong conceptual understanding of functions needs to be a priority at this level.</p>
<p>I was pleased to see that Matrices were moved to MS. Also it was nice to have clarification on wording and how overall concepts in Algebra and Geometry were to align.</p>
<p>- A-REI.3 - Solve linear equations and inequalities in one variable - they learned this in 8th grade. I don't think we should take the part out of the standard that specifies variable coefficients, because that could be the Math 1 addition to 8th grade...or the standard is repetitive. - F-IF.3 - Why did we get rid of the bullets? I like bullet points - makes things clearer! - F-IF.8a - Please specify "by factoring" as in the first draft to make sure teachers know completing the square is not necessary at this level.</p>
<p>1. For the matrices' s standards, translations, rotations, and dilations aren't taught until math 2. To move them to 8th grade means there is a gap between when they are used. We feel as though matrices should be taught in 9th grade. 2. For old standard N-R.1. We feel as though moving this standard to Math 2 was a great idea. 3. On standard NC.M1.F-BF.2 we feel as though geometric sequences and recursive forms are an 8th grade math topic. 4. Moving mathematical standard NC.M1.F-BF.3 to NC.M2.F-BF.3 was a great idea. Shifting graphs is a Math 2 topic. 5. For the old standard G-CO.1 In the second draft proposal, what curricular resources are going to be used for this standard.</p>
<p>Well designed and important connections offered to link geometry and algebra to each other and to other topics.</p>
<p>More clarity in depth and expected applications of concepts would be beneficial.</p>
<p>I have never taught Math 1- No comments</p>
<p>back to school 12 john frrred</p>
<p>I think the current standards are fine the way that they are. If we need to do anything, lets go through the current standards and clarify them instead of rewriting them.</p>
<p>NRN.2 is no clearer than before. I am glad to see matrices back. ASSE.1b, 2 are more clearly written now. FIF3 is more clearly written SID 8 should probably stay in Math 1</p>
<p>Math 1 seems a bit hammered to me - and this is a course where we frequently see struggling math students. I like the algebraic focus limited to linear, quadratic, and exponential functions. I think there is still a great deal of other topics that make the course too much (lots of data and coordinate geometry). And arithmetic sequences belong with linears, but geometric sequences belong with exponentials. A good place for geometric series would be Math 3. And why matrices here if we're never going to do anything with them in a later course (transformations, solving systems, linearity, etc)?</p>
<p>The standards in Math 1 build on the middle school grade-level standards and provide a good base for the following courses.</p>
<p>I think the standards across the board are still not clear. I would like to see the traditional courses brought back so we can clearly define the standards based on the course. It is difficult to blend these courses together. The progression of tradition Algebra 1, Geometry, Algebra 2, will much better allow standards to be clearly defined and give teachers the resources to teach the class. Just like always the state puts together a plan and doesn't fund it so teachers have make copies of materials just to piece together the correct material.</p>
<p>FIF 3 FBF 1.a FBF 2 (Need to be moved from Math I) S1.D9 (Need to be moved from Math I)</p>
<p>I agree with putting quadratic formula and matrices back in Math 1.</p>

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It would be helpful to give us more time to respond. End of year is full of time consuming items for teachers. If you truly wanted helpful feedback, more time would be allowed.

NC.M1.N-RN.2: Rewrite algebraic expressions with integer exponents using the properties of exponents. What will be the difference between this standard and its twin in Math 2? NC.M2.N-RN.2: Rewrite expressions with radicals and rational exponents into equivalent expressions using the properties of exponents.

Geometry - include angles and transversal lines; include parallelograms Algebra - cover exponentials and logarithms; include absolute value; move all quadratics to Math 2

I think there needs to be some form of vertical alignment from middle school to high school. There are still missing pieces that no one is discussing.

I feel that there is some improvement with how the standards were written. I do wish that there could be more time spent on the three function types. There is so much extra that the students do not have time to fully understand the relationships and how to distinguish between them.

I think there are still a lot of standards that overlap and are not completely clear on what should be in each class. A lot of these standards have to do with factoring and quadratics. If it could be clarified specifically what types of equations should be dealt with in each class it would be helpful.

For the Geometry Unit - Coordinate Geometry proofs need to be moved out of Math 1 because students do not learn about the fundamental building blocks of proofs or "shape families" until Math 2. How can we expect students to be successful at proving what type of shape something is without them first understanding what key features make a particular shape that shape? In the Statistics and Probability Unit - Two way tables need to stay. Two way tables are first learned about in 8th grade math and having it in Math 1 as well is a great continuum from 8th grade to Math 1. Calculating standard deviation needs to be moved out. I think that students in Math 1 should not have to calculate standard deviation as it is an advanced statistical topic. For 8th Grade Math - matrices do not belong in 8th grade. I know that they tried to list the association between matrices and transformations but transformations are such a minute part of 8th grade math that it would be irrelevant to throw matrices in the mix. I think matrices is better served in Math 1 when students have a better conceptual understanding of skills and can relate matrices to systems and using them solve systems of equations.

While the changes are clearly well thought-out and the state engaged relevant and qualified stakeholders, I believe that they put North Carolina educators at a disadvantage to those in states with wholesale adoption of CCSS. By changing the standards, our educators will not be able to use instructional materials, curricula, apps, or other pedagogical resources developed in other states. Our teachers are already overburdened with the responsibilities of instructional delivery, relationship building, coaching, maintaining their learning environment, serving on committees, managing student data, etc. - and this is particularly true for those who teach a low-income population. Teachers need access to as many aligned instructional resources as possible that supplement state and district curricula so they can differentiate for the variety of needs and ability levels in their classrooms. The burden of adapting to state-specific standards will ultimately fall to them, which means they will be scouring Google, Pinterest and other lower quality sources or creating materials from scratch to meet the unique demands of North Carolina's standards instead of benefiting from the economies of scale - i.e., resource hubs, subscription services, other states' repositories, etc. that make CCSS-aligned materials available - created by common standards. (Or, teachers will just put unaligned resources in front of their kids.) The changes you propose may marginally improve upon the standards, but they will fail to outweigh the costs of teacher time, focus and energy and the instructional quality. I wish the changes you proposed were less significant.

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This pertains to 8th grade students taking Math 1. Many students come to class missing a huge chunk of the 8th grade curriculum even though they have been in compacted math. Most 7th and 6th grade teachers have no accountability for teaching standards outside their grade level. This being said, as an 8th grade teacher, I am responsible for two year long courses in one year and these Math 1 students in grade 8 have huge conceptual gaps upon being placed in Math 1.

I do not see the need in adding in matrices into the Math 1 Curriculum. I do not see the connection that matrices has with the geometry standards. Students need to be able to plot points on a coordinate grid and visualize the quadrant in which the transformation will end up.

I think that removing the matrices from math 1 was a great idea! There is no need for them in Math 1, they definitely fit better in 8th grade math.

If matrices are going to be added to Math I, another standard needs to be removed. Math I is packed with too much information to cover in a semester. My recommendation is to remove Statistics and Probability standards from Math I and place them in another course.

I feel geometry is too scattered across all three Math courses as well as Middle School math. I would like to see us go back to Algebra 1, Geometry, Algebra 2. I believe students were able to delve deeper into the concepts when the course focused on either algebra or geometry concepts. Proofs especially are harder to cover when you are relying on students to recall theorems from 6th grade on. Plus, concepts do not always get covered as if/then theorems which also negatively impacts a students ability to a formal proof. Finally, Chemistry teachers needed students to be in Algebra 2 or beyond to know that students had covered logic and proof- skills they need to be successful in Chemistry. I am not sure logic is ever covered in curriculum- but I have not looked through the middle school curriculum lately.

Good to move matrices out of Math 1, however, 8th grade math is not the proper place for this. This should be a higher level topic for students and I would remove them from the curriculum until the 4th course (at least).

The Math 1 standards in the draft are fine.

Math 1 seems to be well mapped out with time to cover the topics required.

THESE STANDARDS NEED TO WAIT UNTIL 2017

Pls keep it as it is

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Students' brains are not developmentally ready for all of these concepts. We need to stick to linear and quadratic functions. These poor students don't even understand numbers because we spend too much time teaching the concept of a variable to 1st graders. You people are making school too hard for students from the get go. Go talk to a 1st grader! They are not ready for these concepts. THE PROBLEM STARTS IN ELEMENTARY SCHOOL. Tell me what was wrong with the traditional curriculum. We can incorporate discovery based learning no matter what the standards say. Give us back our 2003 curriculum that corresponded to a textbook so we can have the time to plan fun but challenging activities. Why couldn't you have just said to incorporate more discovery based learning and then given us a binder with those activities? You didn't have to go and change the whole curriculum!! I spend so much time copying worksheets for students to have practice at home and it is a waste of time. I need a textbook so I can use that wasted copying time planning better lessons! When you keep changing the curriculum so that there isn't even a textbook in the world that aligns to it means your list of standards doesn't make sense. There is no textbook that matches your Math 1, Math 2 or Math 3 curriculum. I asked Velvet Simington, who is the head of math for Winston-Salem/Forsyth County, which textbook I could buy for Math III when it first became "law." I wanted a guide to help me plan the order of concepts and get a general idea of how the course was changing. She said there wasn't even a textbook that aligned with the Math III standards in the whole entire world. THAT IS RIDICULOUS! Does that mean the groups of people who designed the standards for Math 1 and Math 2 and Math 3 know more about teaching math and how it should be taught than the math professors that write the textbooks? Students are so bored with school because of the spiraling curriculum. Wait until 7th or 8th grade to introduce a variable please. Let students have time in elementary school during the school day to learn multiplication fact. Let students have time during the school day to learn basic math facts. So many parents do not work a 9 to 5 job and are not home to help or make their kids do homework therefore they fall behind every time they do not learn concepts at home. Elementary school used to be fun. The joy is gone because students are forced to learn concepts they are NOT DEVELOPMENTALLY READY FOR.

Should teach more depth than breath.

The amount of topics and subtopics is too much in Math II standards. We were told inch long and a mile deep. We have a mile long and a mile deep. The students are struggling to keep up with the depth of each topics and there is not enough time in the school calendar to allow students the time to develop, explore, and practice all of the material. It should be considered for Math I students to: Only work through basic concepts of a function and linear functions and exponential functions Move the solving quadratics and factoring into math two Do not add matrices back

Leave completing the square, in one variable in Math 1, so that students will understand it when they use it in conic sections, to find center of circle, vertex of a parabola. Then future teachers can build on the concept. Introduce basic Trigonometric functions, in Math I (sin,cos,tan), so that future course can build on these concepts. I currently teach both high school and part time at a Community College Our students struggle with the Trig. concepts in both high school and college Pre-Cal.

For all contents, teachers need artifacts to show examples of what the standards are talking about for clarity.

1st draft had matrices added to Math I. 2nd draft had matrices moved to 8th grade math. Matrices DO NOT need to be in either course.

I would add using matrices to solve system of equations.

I really believe students should not do quadratics factoring until math 2. Finding the gcd is hard enough for them. This also should not be a calculator inactive test questions in math one as so many struggle with factoring throughout their math career. There is still a lot of content to cover in math 1...

We need to return to the traditional algebra one, geometry, algebra two Path.

The introduction of matrices does not need to be in Math 1. It is being taught in isolation in this course. It should be left to a later course where there is a more in depth study of matrices.

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As a requirement for all students, this still has material that is far-reaching.
This course should not require 8th graders who take Math 1 to take the EOC as well as the EOG for eighth grade. Just the Math 1 EOC should suffice.
This needs to be algebra 1
If additional concepts are being moved to 8th grade, then 8th grade scores are going to be lower than they are now. There is not enough time to teach the entire 8th grade curriculum as is with mastery. Students do not have time to totally deepen understanding with the amount of objectives that are currently on the 8th grade curriculum. If more standards are moved to 8th grade, students WILL CONTINUE to move on to the 9th grade NOT being prepared for math class. 8th grade math curriculum is too full now. If Math I presently has volume for cones, cylinders, and spheres, why must 8th grade teachers also teach it and students be tested on it. Objectives need to be moved out so that students can go to high school being better prepared for their math classes and EOC's.
I like the progression of the standards as proposed in this draft. Like the renaming of standards so that we can easily identify what is in each course by standard name ie NC.M2.F-IF.8a
How does this affect what is taught in 8th grade math? Can we look at revising the 8th grade math standards and look at getting rid of Laws of exponents?
Math I should include matrices. I don't understand the logic behind pushing this topic down to 8th grade. This is a complex topic and I don't think it belongs in middle school. I agree with much of the changes for math I, though I do think that there are too many big concepts for students to grasp in a semester's worth of time. The geometry sounds good but I think it and the stats will get pushed aside for the algebra strand.
I would still prefer a traditional track...and use concepts of Math 1 to create more rigor.
As a teacher of both 8th grade Math and Math1, I now need to see any revisions to 8th grade math because some things moved there as well. Will those be additional standards in 8th grade math or will there replace some standards that are being removed from 8th grade math?
Looks pretty good
The math 1 goals are explained better. My concern is that it will not help the average student who takes this course in High School.
You are looking at moving standards to the 8th grade. Matrices would be totally brand new to the 8th grade. And the one about informal arguments for the area and volume formulas---why move it---Math 1 has the formulas in their standards so they are appropriate where they are. Are you planning on removing some of the 8th grade standards to make room for the new ones? If not, why? As an 8th grade teacher, I struggle with trying to teach all the 8th grade standards now. How could I possibly fit in anything else into the 8th grade year? Please reconsider the revisions that you have made.
Cc math 1 students have a hard time understanding standard deviation. they can give a concrete example and use the formula but have a hard time understanding what it really means in terms of the data.
Requiring Students to complete Math III who are not going to college is silly. Let's focus on functional math skills. I do agree that Math I, II, III are appropriate for college bound students. There needs to be another Mathematics towards graduation for other students.

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The move to Math 1 thru Math 3 is fatally flawed in that it removes Geometry as a separate course. Geometry is a time-tested mental gymnasium which has introduced students to concepts of proof and logical reasoning for centuries. It should never be considered as a step in self motivating process of "getting students farther along in math" - it is a thing unto itself. The new guidelines reduce Geometry to a handful of facts necessary for the development of Algebra. This is made all the more tragic given Algebra continues to be concentrating on solving equations without technology. The concept of Functions is easily improved by an embracing of programming and computer science, Statistics and Probability should become a major theme, probably outgrowing the outdated concentration towards "PreCalculus"

For the most part, I think that the revisions for Math 1 meet the needs of students, but I thought that the original Math 1 standards were fine. What I am very concerned about is the fact that more material is being moved to eighth grade. The middle school curriculum has way too much content in it already in comparison to high school curriculum. Most of the high school curriculum spirals and students are learning very little new material compared to middle school. Please revisit the middle school math curriculum first because there is not enough time for students to master the content already in the year without the additions. If they must learn even more material, they will come to high school even less prepared. Please fix the middle school content BEFORE touching the high school standards.

Overall my concern is that students are not grasping the concepts of mathematics at all. More kids are struggling with basic math and cannot apply math to more advance concepts such as alg, trig, statistics, or probability. We are doing them a disservice if the curriculum is not revisited and broken down into a structure starting with basic math with movement towards more advanced math.

We should maintain the emphasis it had and continue to focus the material as it used to be for Algebra 1. The Algebra 1 curriculum worked. The only reason math 1 has a semblance of working is because it still follows the basis of Algebra 1.

I have one major issue with Math I and it is that OCS students should not have to be subjected to the same exam as other regular education Math I students. Their ability to reason mathematically, read and comprehend complex word problems, and process problems that require higher order thinking skills is just not present. No matter how hard they work, they feel defeated when they face that exam and see questions that are so far beyond their ability level. My OCS group can do basic problems involving graphing lines, matrices, and even basic statistics/best fit line problems. The exam requires much more than their capabilities afford them. For regular education students, I feel that the standards are very well written. More clarification is needed for "Proving geometric theorems algebraically" to include the exact theorems.

Math 1 remains fairly close to what once was Algebra 1.

This course isn't too bad.

I feel that square roots being moved to math 2 may create some confusion and should probably remain a part of math 1

Standards are much more clear, and the geometry standard is much better. However, I would still prefer to have Geometry as a separate course because students are lacking the appropriate foundation in this standard.

If matrices are added to 8th grade math, shouldn't we revisit matrices in math 1, and the other maths since it is on the ACT.

I am curious about which geometric theorems in Math I would be proved algebraically? Would also like to see language in 8th grade related to thinking about transformations as functions (and functions as transformations) because transformations are functions.

The draft 2 proposals seem to be a little less specific than the current or draft 1 standard proposals; however, the draft 2 proposals seem to be more manageable, as well.

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NOTICE I did mark yes that it does meet the needs of students, but not all students. I feel that we are doing our children an injustice by treating them all the same. All children are not on the same level and will NEVER BE! NO ADULTS are on the same level and will never be! We as parents, educators, politicians, need to realize what we are doing to the self esteem of these children that do not succeed in these types of classes. We need basic math back for those that are not seeking a career in higher level jobs such as engineering. I am a firm believer in a good education and I believe that North Carolina Teachers do an excellent job with seeing that our students are educated. I just don't like how all children are being treated all the same. Not all are the same and I believe that we need children to feel successful and not defeated all the time. They begin to become okay with feeling like a failure and this leads to many psychological issues in adult life.

I just would like it to not be so fast paced that those that have math difficulties don't get so frustrated that they over think and fail. My child cries every time she has to take math in high school. She feels it is too fast paced and puts a lot of pressure on her. I don't think math was designed to be that way. At least it was not like that for me when I was in school. I actually enjoyed math and by my senior year I was in calculus. I am not saying times are not changing but the fast pace and pressure on these kids is not helping them but hurting them.

There should not be a no-calculator portion on the Math 1 EOC. If students miss those questions, it doesn't reveal whether they missed it because they didn't know the content from the standards or because they messed up a calculation. Math 1 is really ridiculous to begin with, as it seems like the hardest math class we offer at the high school level outside of Pre-Calculus Honors and the AP classes. Why can't students learn to use the calculator to solve systems by matrices? Students should be exposed to all different strategies for solving systems and not be limited to just algebraic methods for the sole purpose to eliminate a method that's reduced to simple button pushing. A lot of things in our world today are simple button pushing without having to know why something works. I solved by matrices in high school, then learned the details of it in college only because I was a math major. The important piece is whether students can accurately identify the solution and explain what it tells them about the problem. Most systems in the real world aren't going to be 2 linear equations to begin with.

Sorry that matrices was removed.

No changes should be made. Teachers finally have an understanding of what they are supposed to be teaching. If things are changed, yet again, teachers will be right back where they started years ago when Common Core was first introduced; confused with poor test scores and students not properly prepared for future courses due to the confusion.

It is too early to introduce imaginary numbers in Math I. Many 7th and 8th graders are taking this course and this concept is too mature for them to truly grasp and understand. Matrices should be in Math I as it follows nicely from introducing operations of integers in 7th grade math.

I do not think that residuals should be included in the study of statistics at this level. I think it should be removed and included in a fourth math along with the computation and interpretation of the correlation coefficient.

Love the clarity provided by the removal of notes. The standards have been rewritten in a manner consistent with required college and career readiness.

I want Math I to look like Algebra I. Get rid of this common core approach. The students are suffering greatly in the classroom. I thought common core was revoked. We need to go back to what worked in the past. Alg I, Geo and Alg II. Additionally, we currently have Alg I, Geo, and Alg II textbooks. The common core textbook that is being looked at for adoption for Math I is the Core Plus Math Course 1 by McGraw Hill. It is the only book for Math I that I can find on the book adoption list. This book is unacceptable. It is Spring Board with a hard cover. Additionally, it is written to the common core standards. The book is already obsolete. I also thought it was Math I and not Math 1.

Math 1 Public Comments

We need to go back to traditional Algebra I, Geometry, and Algebra 2. Concepts are taught in isolation, and there is no understanding. For example, when trying to teach my students in Common Core Math 2 the HL Theorem, we had a long conversation about the fact that if you use HL, then you must have a right triangle. But the converse of that statement is not true. Because we have completely killed Geometry, the students have no concept of logic, what a converse, inverse, and contrapositive are. The students also get no build up into how to name an angle, or a side. It is very difficult to teach SAS, SSS, etc, without first going through the Geometry basics. I have taught low level students my entire career, and I had much more success teaching Geometry in the old pathway. I've also been teaching Calculus for 12 years, and this group this year is the weakest I have ever had, and they are all a product of Common Core. This was implemented horribly, and there is no connection between concepts.

I think that the revisions for Math 1 meet the needs of the students. If matrices are added to Math 1, then I think they need to be for solving systems of equations only. Also, they should be allowed to use a calculator with those types of questions (not row-reducing by hand at this point). Otherwise, the Math 1 standards are very similar to the previous standards, which were sufficient. Moving all exponential functions to Math 1 will be beneficial in the student's learning and thought process.

With the mobility of students into and out of the state along with the need to prepare students for higher level science courses with national prerequisites based on knowledge in a traditional Algebra sequence, I believe we are doing a disservice to those students. While being at the leading edge of math education might be an accolade to the state, doing so without the remediation support of national online programs or textbooks will lead to lowered achievement in all math and subsequently science courses.

The jumping around in the Math 1 curriculum across different subject areas confuses students. They grow far better in their algebra skills if they are consistently practicing those concepts all year.

MORE CLARITY

There are way too many concepts for the students to possibly master in one year. Some of the concepts are too advanced for Math 1, such as linear programming, residuals and interest that is compounded less than yearly.

Thank you for removing rational exponents.

Matrices is introduced too early, this is more geared towards Math III.

Great changes!

This course is STILL TOO FULL!!! So much expectations for such immature learners. Somehow we have got to remove some things from the Math 1 plate.

There is too much material to cover in a year's time. Teachers are not able to really teach the math in a way that students can get a real understanding of the concepts and applications of the math. We need to look at what we are asking from our students so that they are not just prepped for a test, but so they have a full and conceptual knowledge of the math. Without a great foundation for Math I, II, III, you lose the students with each step they take. We need to make sure that we are doing things to meet their needs not the state's wants.

Better ordering and better building of learning understanding

Some of the Math is way over parents' heads, how do you expect us to help our children.

In solving systems of linear functions: is elimination supposed to be taught? Is that skill also supposed to be taught in MS? Do students first see absolute value functions and equations in Math 3? Why are matrices being re-introduced to Math 1? This was removed several years ago.

Love the adding matrix back into Math 1 like it was in Algebra 1. Awesome!!!

My child has done very well (99 - 100) in Math I and has not had any problems understanding the concepts. I feel like this is an excellent way to introduce all math concepts.

Math 1 Public Comments

In the twenty years that I have been teaching, I truly believe that the students really learned more through Algebra 1, Geometry, and Algebra 2. I am finding that the retention of the material has gotten worse over the implement of Common Core.

Some of the revisions are great and make the standards even more clear, for example M1.A-SSE.3. From the objective it's clear how the objective can be both assessed and used in instruction. On the other hand, there are some that are less clear, for example M1.A-APR.1. How does a student demonstrate 'building an understanding'? Is the objective that students can explain (or prove?) that both polynomials and integers form algebraic groups with similar operations and laws? Or is it that students can solve problems by adding and subtracting quadratic expressions? In some standards that use bullets, like M1.G-GPE.4, it's not clear whether the bullets are examples of how a student could meet objective, or are the only way a student could meet them.

Our students are entering high school one to two years behind in overall math skills. This is not isolated to just WNC. They are simply not mastering the necessary skills required of HS Math. Evidence of this is easily provided from both formal and informal assessments. We can either reduce the number of concepts covered in the curriculum which allows for mastery, or we can continue to send them to colleges where they struggle. In an 18 week semester, it is not unusual for a student to be absent 5- 10 days. If you add a week of review and a week for testing, this means teachers have 14 weeks or 70 days to cover the curriculum dictated by NCDPI. I. E. It's not the standards themselves, it is the quantity of standards that is causing the issues. Can the average student master the number of standards in 70 days. The answer is a definite no.

The curriculum still appears to have a large number of standards to cover especially in comparison to Math 2 and Math 3. I strongly believe the geometry standards covering volume should be addressed in 8th grade. Quadratic and Exponential Functions are new to Math 1 students and require a lot of time. Typically students enter Math 1 with very little knowledge of systems of equations. A great deal of time is spent teaching and reteaching these standards. I would prefer the curriculum have less standards.

None - it's good :)

This course is pretty similar to the original Math I course, so the standards seem sufficient.

Postponing circles and radians, absolute value and piecewise functions to Math 3 is counterproductive and will not lead to better conceptual understanding. This delay allows students to solidify misconceptions and misperceptions of mathematics.

I'm not sure the purpose of adding matrices to the math 1 curriculum. The Math 1 curriculum was good the way it was....

Students coming from the middle schools into Math I in the 9th grade tend to be extremely unprepared in terms of not only pre-requisite basics. They have somehow been passed along without developing good work habits. Critical thinking skills are extremely lacking. The curriculum is fairly reasonable, but the fortitude to hold students accountable for their own learning is seriously lacking in educational leaders.

Functions vs. linear unclear

We need to go back to Algebra 1, Algebra 2, and Geometry! If not, just leave the standards alone.

Math 1 should continue to develop area and volume concepts.

Math 1 Public Comments

Matrices are not used in any other level of math (2 or 3) and are not necessary and should not be added to the math 1 curriculum. If they are going to be added then the question needs to be answered: what value do they add to the course. Yes, they make a quick way to do systems in the calculator, but other than that they don't add to anything else. There is a lot of research done by the mathematics community, and this research has determined that 9th grade students are typically too young cognitively to understand fully quadratic functions. Not only are students introduced to quadratics, but in order to do quadratics without a calculator, student must also understand polynomial expressions. Everything to do with quadratics must be limited to $a=1$ in order to build a basis and to be on a level in which the students understand. Lastly, if the eoc is going to remain partially calculator inactive, then it needs to test more concept knowledge in that portion that actually matches the standards and less testing their numeracy skills (except for of course the numbers standards).

The progression of the standards is appropriate for Math 1.

Geometry is done a great disservice in all levels. There is so much basic information that is an afterthought when it comes to geometry topics. Notations, symbols, basic properties, definitions, postulates and theorems are often passed over, then they are expected to begin "proofs" in Math 2 with no understanding of what one is. All the more reason to bring back Geometry to a separate course.

I believe the changes show progress towards more clarity and feasibility of teaching all standards within one school year. While integrating the mathematical strands allows the teacher to show connections among the different strands, it poses a significant challenge to teachers as they do not have adequate time to explore the standards in depth. Another issue is moving certain standards to grade 8, which is already overfilled with foundational standards that are essential to success at the high school level.

This course needs to be entirely calculator active in order for students to be able to master the higher level thinking skills. They will continue to get hung up in the computation problems, if not.

We should leave the standards the way they are or just go back to the traditions Algebra I, Algebra II and Geometry curriculum. We also need a curriculum pathway that allows lower level students to take technical math courses like we used to have 10 years ago. Yes, there is the argument that we have the substitute track but our school systems frown upon that because they are scared of looking like they are not rigorous. The teachers are under pressure to hold to standards because if we truly teach for mastery learning, then we would probably be looking at 25 to 30 % failure rates and then the administration would wonder why? It's really sad when we have students get to Math III or even their 4th math course and some of the students still can not solve a two or 3 step equation accurately.

The first draft proposed standard is easier to understand and still has the students work on the curriculum.

NC Math 1 seems ok

I'm really good with the removal of matrices in Math 1 in the 2nd draft.

The problem with integrating Algebra 1, Geometry, and Algebra 2 material into Math 1, Math 2, and Math 3 is that there is not a true flow. It's like teaching a little bit of this, then jumping to something else that isn't related, then throwing in something else that doesn't relate to anything taught before.

Matrices are not used in any other level of math (2 or 3) and are not necessary and should not be added to the math 1 curriculum. If they are going to be added then the question needs to be answered: what value do they add to the course. Yes, they make a quick way to do systems in the calculator, but other than that they don't add to anything else. Also, there is a lot of research available to the ability of young students to understand quadratics. There is too much quadratic material even in the new math 1 proposed standards. If quadratics are going to be in math 1, they should absolutely be limited to a equals 1. Lastly, if the eoc is going to remain partially calculator inactive, then it needs to test more concept knowledge in that portion that actually matches the standards and less testing their numeracy skills (except for of course the numbers standards).

Math 1 Public Comments

You need to work on the EOC and releasing review items. We are truly shooting in the dark. If I am not quiet sure how far to take something and I go to the release test I still only have on test to look at and I can't really find enough resources to clarify. Standards need to be written with more clarity and possible examples of what questions would look like.

The second revision seems to condense what the standards are and does not give as great of depth to the matter. I'd rather the standards have more "jargon" and specifics then condensed for the sake of condensing. I did like with moving

I am concerned about some of the standards that are suggested to move to 8th grade for fear of overloading 8th grade math, especially for students who take Math 1 in 8th grade. Often, teachers attempt to teach Math 1 and 8th grade standards in the same year which can be overwhelming and leave students at a deficit.

There are parts of math 1 that are to high order for students of that level. Some of what I have seen should not be taught until Sr. year or college. way to high and confusing for these kids. I would prefer to go back to Algebra I.

The Math I grouping looks possible to cover, which it is not currently.

Will there be a new EOC for 2016-2017 school year? We have heard that if there is less than 20% change in standards, that the EOC will not be revised. I disagree with this, because 20% is a huge change, especially with the addition of the matrices and the material that has been shifted to other courses.

My question would be, would we still do volume and area application problems in Math I? I wasn't sure if that was being taken out by the way the standards read.

I can not answer the questions as I have NEVER SEEN THE STANDARDS. They have never been advertised as available for me to review. All I know is my child struggles with math and has done so since the 1st grade. I have tried to get teachers to help, but none have the time or energy. I have employed tutors only to just get her by. I feel the school system has dramatically failed my child in the area of math and no set of standards will ever change that.

Please consult with NCTM, MAA, and ASA. All support going back to the Algebra I -Geometry -Algebra II - Trigonometry sequence. Do you realize the number of students who graduate high school having taken AP Calculus AB or AP Stats that are placed into remedial mathematics? Give the students a firm, traditional pre-calculus background. We will take care of the rest.

Why are we dumbing it down? Our students are very capable and able to meet and exceeds the demands of math common for core. It is our ethical duty to challenge and support ALL of our students so that they prepared for life after high school. We owe them at least that!

This comment applies to Math 1, 2, and 3-although I understand the rationale for combining algebra and geometry standards across all 3 levels, I believe that the standards in general do not meet the needs of ALL students. Students who struggle with math have great difficulty even passing Math I and its EOC let alone continuing with Math II and Math III. (This opinion comes from my firsthand experience with high school students.) I feel that we are actually doing a disservice to our students by requiring them to engage in mathematical torture via Math I, II and III plus adding a fourth math as a requirement for high school graduation.

Math 1 Public Comments

Ultimately all of the standards are fine but my concerns lie in implementation. With math, since all of the subjects are connected but are *impossible* to explore without a thorough grasp of foundational skills, what supports will be available for students in schools with already low-performing maths students? Furthermore, and this is the most important aspect, will these standards be agreed upon with adequate time to create resources to comply with these standards? Considering our legislature's exuberance in passing laws without either reading them thoroughly or with little consideration for their effects on the population that is affected by the laws, I am skeptical.

I do not understand how a student is to prove geometric statements when proofs are not introduced until Math II.

I appreciate the additional clarity that the latest draft provides. I am still doubtful that students should be using linear and exponential regression commands on calculators without having the knowledge of what regression truly is.

Students no longer have skills to solve equations or factor. We have pushed the material too far back to the middle school, where teachers who are not certified math teachers are teaching our students the foundations. Certified math teachers need to be teaching the foundations. There is no logic in Math I. We are constantly jumping back and forth between Alg 1, Geometry, Statistics, and Alg 2. Students are more confused than ever. They cannot retain anything because they have learned nothing well.

I had two children in Math 1 this year. The 9th grader was in a HS course that was non-honors; the 8th grader was in a middle school honors math class. It was a great comparison. With my BA math degree, I could at least help the 9th grade student and it appeared to be a blend of Geometry & Algebra taught separately with relationships shown. But this blend seems to be causing a confusion, as I had a discussion with some HS students in our youth group. They were from many different math backgrounds, and NONE of them could distinguish nor define the difference between Geometry, Algebra, Calculus, Physics, etc. They are ALL equally as confused. My honors course student, I believe may have ultimately been thrust several years ahead. That is except for the teachers original comment to the parents, that he was teaching at such a "high" level that he didn't want any parents to call him because their child was ONLY making a B; because a B in his class was like an A in other classes. I was okay with that....until I realized the blending of all of these subjects is confusing the heck out of some potentially smart kids, with mine being just one of them. I think I would have never gone into a math field had I endured this confusion. My honors student that is pulling A's in all other subjects, is confused and needing extra help that the teacher comments that if they are not getting it the first time, that they should NOT be in his class. I consider her 80 to 83's pretty good, considering he has circled back to eliminate confusion very seldom. So he talked her into a regular Math II class based on this "horrible?" average that he considered too good at the beginning of the year to even warrant a call from a parent. And this is not a teacher issue, or any of our kids could define the difference in the types of math they are learning in ANY math class.

Need to do away with non-calculator part.

I wish the state would create a "bible" of sample test questions like was done for the old SCOS for Algebra 1, Algebra 2, and geometry.

The existing standards for Math 1 are already very lengthy, so adding matrices has just added one more thing to an already overwhelming list of topics for freshmen. There has not been that much progression to revising the standards since it seems that standards have just been regrouped and not much has been omitted. There should be a small number of power standards, which are outlined by the conceptual categories so that we can spend more time going in depth rather than trying to briefly expose students to several concepts within a semester. The amount of standards would not be as much of an issue if Math 1 was offered as a year-long course for all students. If students did not take Math 1 in 8th grade, they need that additional time to really solidify their understanding of the concepts that build the foundation of all other math courses.

Math 1 Public Comments

There are too many concepts expected to be taught in Math 1. There is not enough time for students to achieve mastery. Only a cursory knowledge of the material is being obtained, if that. That is why the test scores are so low! The students are not learning enough of the material because we are pushing them through it too fast in order to "cover" everything in time. The standards are not as clear as they need to be. There should be a very clear expectation of what you want me to teach my students. The "clarifying objectives" should not be vague at all. That negates the name of it! There should be more resources available and sample questions for teachers to look at. Releasing one single version of the exam is not sufficient for teachers and students to know what is expected of them. I spend hours and hours online looking for resources to help. I find lots of resources for Common Core, but only for other states. Never for NC.

Educators need to see specific examples of the questions that they are being expected to teach in the unpacking document. Many times the standard are so broad and cover too much material. Also, students lots of times come to us lacking the basics from the year before for whatever reason. Standards should also consider what students are cognitively ready to understand at each grade level. In MANY cases we are expecting student to comprehend abstract concepts that the brain is not even develop for yet. For example, I was helping my 7th grader with geometry problems that just a few years ago I taught in high school geometry. We are setting our students up for failure in many cases expecting them to think abstractly without a good foundation.

I am an Exceptional Children's teacher in the separate setting at the high school level. I teach the Occupational Course of Study (OCS) program. My students are required to take the same MATH I EOC exam that the regular education students are required to take. Students in the OCS program cannot pass this exam (unless they do so by correctly guessing). My students have difficulty understanding all of the concepts presented in the MATH I coursework. OCS teachers have to present the material at a much slower pace and never have enough time during a semester to cover all of the material that the exam covers. It is NOT fair to put them through the task and stress of taking this exam.

Students learn at different levels. They should not all be taught the same according to this grouping.

Thank you, these seem to make more sense with the flow.

algebra 1 geometry algebra2

Concern about differentiated instruction.

Move Inverse Variation to Math I and move all of the Quadratics to Math II. Inverse Variation is a natural extension for Linear Functions especially Direct Variation.

The standards seem to allow students to get a better foundation of concepts that will help them with higher math levels.

As a middle school Math 1 teacher the additional standards that have been moved out of Math 2 and into Math 1 may be too much for these students who also have 8th grade standards that they are responsible for as well as an EOG. The curriculum is already very fast paced and demanding for the 8th grade students. It will become a greater challenge for the students to truly understand the material if more keeps being added to it. Matrices take a bit of time to understand and the students already do not have extra time in their year.

Unsure of the need for residuals in Math 1. Area/ Surface area and volume to 7th/8th Grade Math - but still needs to be incorporated into Math 1, as used heavily in Math 2.

Math 1 does not need to introduce Exponential Functions. They have all they can handle taking care of linear and quadratics sufficiently. It is fine to wait on this topic until Math 3. Have Math 1 do arithmetic sequences which connects nicely to Linear Equations.

allows for integrated study of units rather than separate silos of study. Most of the countries around the world favor this method of integrated math study, rather than our separate system here. the uniformity around the state is assured.

Math 1 Public Comments

<p>I still think that the Math I standards includes too much material. Students are not able to fully grasp the concepts in depth.</p>
<p>This course looked good.</p>
<p>As a teacher of 8th grade math, Math 1 and Math 2, I do not think that matrices should be removed form Math 1 and placed in 8th grade math.</p>
<p>Need to look at closely</p>
<p>These are the students that seem the most woefully under prepared for high school mathematics. Perhaps the reason for this does not lie with the high schools but with the middle schools who in my experience have very few teachers who can teach this advanced content to students with an eye towards future mathematics courses. Middle grade and elementary math teachers need to take advanced calculus and statistics in college. My experience is the teaching pool in NC in mathematics is getting weaker and weaker. I tutor for SAT/ACT and students with 4.0's can't tell me 10% of 600...THEIR TEACHERS NEVER TAUGHT THEM. You can increase standards and rewrite them all you want...until you get outstanding teachers who can relay the content, our students in NC will continue to fall behind in mathematics.</p>
<p>There was absolutely nothing wrong with the way math as taught in the late 1980's & earlier. I see no reason for any changes to have been necessary at all. Math 1 should stick to the very basic fundamentals of Algebra 1 including a clear explanation of integers, positive & negatives, the rules of when & why to add, subtract, multiply, or divide integers, exploration of the more intricate shapes such as the trapezoid, hexagons, the 3 basic types of triangles & how to measure the sides. Also an exploration of the basics of graphing points on a grid using 2 given coordinates such as (2,8). Of course use of letter replacement of #'s should be explained & practiced in the very basic of terms as well. Ultimately, Math 1 should be an introduction to Algebraic & Geometric concepts while continuing to provide students with plenty of opportunity to practice basic addition, subtraction, multiplication, division, & reasoning skills they will need & could use in everyday life. This should be the first time any student has seen any Algebra or Geometry other than the primary things like recognition of basic shapes, measurement with rulers in inches & feet & maybe a brief lesson on the difference between US standard of measures compared to the English standard of measures in centimeters & the history & reasons behind those differences.</p>
<p>The state is requiring too much information to be covered in a short time in all math courses but especially Math 1. Students are not grasping concepts because they are being required to learn so much so quickly they do not have time to understand a concept. They simply learn it in short term memory for a test and move on. That defining of standards will slightly help as they are more understandable as to what exactly is expected at each level. I think all students in NC at all grade levels are being asked to learn math concepts too early. This hinders them from learning these concepts because they do not fully understand them.</p>
<p>Unpacking documents will be essential for clarity. Embedded assessment examples will allow for vertical alignment in high school math. These documents should be written and published by the team who wrote these revised standards. This is critical work.</p>
<p>The standards revisions will meet the needs of students starting in Math 1 but for those who have already had Math 1 what transition will take place? We have seen far too many gaps in students that had Algebra 1 and then went into Math 2 and worse for those students that had Algebra 1 and Geometry and then were placed in Math 3. There was no transition. Those students should have been allowed to continue in the original sequence.</p>
<p>is all of this being done merely to provide political distance from Common Core? The differences are slight, and possible not meaningful. if so, then the exercise has been a huge waste of money.</p>
<p>Statistics and probability should be in a 4th math. If the content in this class is not mastered, there is not enough time in Math 2 & 3 to reteach this material. Meaning... a higher percentage on an appropriately leveled test should be used vs the huge curve now.</p>
<p>To what level is the quadratics units taught? $a = 1$?</p>

Math 1 Public Comments

This should go back and cover 90% of Algebra I. My students find the way it is confusing.

Focus on two or three functions. For example, linear, exponential and absolute value. Matrices. Arithmetic and geometric sequences and series.

The problem has not been the order of topics, but rather teachers' lack of preparation to teach it. This seems ridiculous to ask people to comment on whether they think the order of presentation of the topics meets students' needs. What doesn't meet students' needs is teaching rigorous math as if it is remedial, stretching one course over two courses: Foundations of Math I/Math I, Foundations of Math II/Math II, etc. Schools lack of resources for delivering rigorous math is the problem. Surely you know that. This survey will give you a way to say that you listened to the public, and have now ordered math topics in some way that the math illiterate public believes best meets the needs of students.

I teach low level students and in a one year class I still have problems completing all the standards. There are so many new standards that students have never seen and there is a lot of background knowledge that has to be covered before even getting into the standard. The only exposure they come to 9th grade with is Linear and some functions and that is if they had a good 8th grade teacher. You can put on paper that there are 4 main functions, but put the breakdown of everything within those 4 things and there are 50 -60 standards to be mastered. 180 divided by 60 means 3 days per standard and most students need more than this amount of time to even start to master this material.

I think direct and inverse variation should be put back in to Math I standards as they were back in the NC Standard Course of Study from Algebra I.

I think that the new standards are definitely better. The old ones were too much and too many to cover.

Math 1 did better in the past as ALGEBRA 1

There is no way to expect mastery of concepts with the amount of standards included. Compare the standards for AFM, Discrete, Precalculus (only 8-10 topics) compared to 50+ with Math 1, 2, and 3. Our test scores SUCK and the "love curve" provides meaningless data of what our students really know and comprehend. I suggest we scaled back the standards even more to be able to provide an environment where both teachers and students can be successful.

The Math I curriculum does not adequately prepare students for either their future or future math courses. The state needs to reconsider Algebra I, Algebra II, and Geometry

We as a state need to go back to Algebra I, Geometry, and Algebra II. As a former Geometry teacher, I recognize that the three courses we now offer do not collectively cover all of the Geometry concepts that we used to cover on the older system. This hurts our students on standardized testing and in life. They need a greater sense of Geometry. They do not get that with it being broken up over several different courses. I know this is not what DPI wants to hear because they are invested in Math 1, Math 2, and Math 3. But it is the truth that system is causing us to graduate the most uneducated students I have ever taught. As a teacher of PreCalculus and Calculus, the students that are coming to me from the current system are incredibly unprepared. I have spoken with teachers in other systems and they are experiencing the same.

I'm curious as to why function transformations were completely removed from this course. NC.M1.F-IF.8a - Why are the key features not listed our when they were in the first revision? Are the key features supposed to be the ones listed in the first revision, or should they include the key features listed in F.IF 4 & 7? NC.M1.F-IF.8b - Should this include problems like $(1.01)^{12t}$? Or is it limited strictly to a variable exponent with a coefficient of 1? NC.M1.S-ID.1 - Should students interpret of histograms and box plots in addition to creating them? Thank you for the clarification of where the standards moved. Overall, I think the standards are clearer than they were with the first revision.

Math 1 Public Comments

I feel that absolute value equations need to be incorporated at this point. I don't think that matrices needs to be a focus, as it is a tool for teaching systems.

There should only be three main categories: Algebra, Geometry, and Statistics and Probability. Everything that is mentioned in NQ and F could be included in those three. Teachers have to create lessons in Alg, Geom, and Stats to incorporate NQ and F anyway. One simply does not teach a lesson on Functions, for example, without using algebra. Similarly, algebra is mostly about functions. The same is true for geometry, statistics, and probability. It would be much easier to simply include the Functions and Number and Quantity objectives as part of the objectives for Algebra, Geometry, and Statistics.

The standards aren't perfect and probably will not ever be. There is not enough time for the average or below average student to retain what they are suppose to learn. Year long Math 1 would make it easier for the average or below average student to retain what they are suppose to learn. Changes in the curriculum will not change these facts that certain students can not learn theoretical math when they have a difficult time counting or subtracting money. Also, too many students get passed along to the next math class due to weak testing standards where students pass the class when they could have guessed A and receive a passing grade.

My overall comment is that we need to go back to Algebra One, Algebra Two, and Geometry. This Math One crap needs to be dropped. The blending of all three across grade spans needs to stop. We need to go back to the way it was. This Math 1, 2, and 3 has been killing teachers and students. What has really been bad is our teachers have been given no support form the state to implement this over the year. There have been no books or materials for our teachers. To top it off our teachers have not received any testing data drilling down to the individual objective and question. The test data teachers receive is useless for them to use to improve their instruction. Our children are suffering. Fix it.

I like focusing on Linear, Quadratic and Exponential in math I.

My major concern for all 3 integrated maths is the chopping up of geometry. I think that the coherence of that course as taught in a traditional setting. Splitting it up over three years, while on paper seems to be a great idea, in reality, you need it to be together. Trying to teach proofs is impossible if students don't know the postulates and theorems needed for reasoning. While they may have piecemeal picked them up over the three years, they certainly don't remember them. Add in the extra time between courses on block scheduling and in subsequent maths we spend more time teaching stuff that they should already know, leaving us little time for all the stuff we are supposed to expound on. For example in Math 2 I end up reteaching all the geometry stuff they were supposed to get in Math 1 because they have forgotten it.

The conceptual categories for Math 1 should be taught in this order: Number & Quantity (to review the real number system and number sense), Algebra (to exercise the use of the real number system in a procedural manner for the first time), Functions (using algebra to solve function equations and also using number sense for numerical evaluation), Geometry (direct application of number sense and algebra with coordinate geometry concepts), and Statistics/Probability (provides a real world understanding of the functions learned for the first time). Otherwise, I am satisfied with the specific topics that are covered exclusively in Math 1.

Math 1 Public Comments

The biggest issue for Math 1 is not as much the content as the assessment. The Math 1 EOC is a reading and reasoning test but there is very little for students to demonstrate skills that they have learned due to hard work and effort. It is also just mean that the students must start with the calculator inactive part of the test and decide when to give up and go to the calculator active part. There should be a significant part of assessment that allows students to demonstrate their skills on standards. The second biggest problem with Math 1 is that there is so much content for students with zero math credits. If they're taking the course in high school, they likely are already weak in the subject. If you add more objectives, the students don't just inherently learn more content. More likely they will be less likely to have a true depth of understanding and confidence on the content that is covered. onto the draft standards: NC.M1.A-CED.1 - Create equations and inequalities in one variable that represent linear, exponential, and quadratic relationships and use them to solve problems. Do you really want exponential inequalities in Math 1? Solving Quadratics is limited to factoring to find zeros, so is quadratic inequalities really part of the standard. I would think these inequalities don't fit with the latest draft. I propose: Create equations in one variable that represent linear, exponential, and quadratic relationships and use them to solve problems; create inequalities in one variable that represent linear relationships and use them to solve problems. _____

NC.M1.A-APR.3 - Understand the relationships among the factors of a quadratic expression, the solutions of a quadratic equation, and the zeros of a quadratic function. There is already too much content in Math 1. Finding zeroes originally was part of Algebra 2. If you are going to add more content to Math 1; even more needs to be removed. Just adding more content to middle school doesn't mean that the students know more content. Despite many students failing classes and only 5% proficient on the 8th grade EOG, 0 students from our feeder schools were retained. Adding even more content to math 1 only makes things worse.

_____ NC.M1.A-REI.1 - Solve for a quantity of interest in formulas used in science and mathematics using the same reasoning as in solving equations. In the current and 1st draft, it was made explicitly clear that the formulas would be limited to linear. I appreciated the specificity. The latest draft has removed this limitation. If this was intentional, it should be clear what the current limitation is. (If unintentional - then the limitation should again be specified.) _____

NC.M1.A-REI.1 Justify a chosen solution method and each step of the solving process for linear and quadratic equations using mathematical reasoning. I would like an example of what this looks like for a math 1 student. Justifying the method for quadratics also seems excessive if they've only been taught to use inspection, taking a square root or factoring. _____

NC.M1.A-REI.5 Explain why replacing one equation in a system of linear equations by the sum of that equation and a multiple of the other produces a system with the same solutions. While an improvement over the current standard. What does this look like from a math 1 student? I don't think this should be a standard for math students with 0 math credits. _____

NC.M1.A-REI.6 - Use tables, graphs, or algebraic methods (substitution and elimination) to find approximate or exact solutions to systems of linear equations and interpret solutions in terms of a context. Why are we now to start using tables to solve systems of equations? The more methods you teach, the less likely students are confident in any of the methods. _____

NC.M1.A-REI.11 - Build an understanding of why the x-coordinates of the points where the graphs of two linear, exponential, or quadratic equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$ and approximate solutions using a graphing technology or successive approximations with a table of values. This successive approximations method seems unwieldy for math 1. I really don't see how you would use the method if you were provided with a table of values. (I understand how using the method would result in a table of values - but not if you started with one.) I don't think this method should be part of the defined standard of solving systems. _____

_____ Represent the solutions of a linear inequality or a system of linear inequalities graphically as a region of the plane. "two variables" was removed from the standard. I think it should be returned for clarity. (If we're talking about regions of the plane, it is implied - but it's good to be clear.) _____

NC.M1.F-IF.3 - Recognize that recursively and explicitly defined sequences are functions whose domain is a subset of the integers, the terms of an arithmetic sequence are a subset of the range of a linear function, and the terms of a geometric sequence are a subset of the range of

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an exponential function. This standard (and the current standard) seem unnecessary and unlikely. I don't foresee many math 1 students "recognizing" this on their own. If classtime is used to explain and teach this - then the students many end up "understanding" this. I would remove this standard.

_____ NC.M1.F-IF.4 - Interpret key features of graphs, tables, and verbal descriptions in context to describe functions that arise in applications relating two quantities, including: intercepts; intervals where the function is increasing, decreasing, positive, or negative; and maximums and minimums. The current standard limits this to linear, exponential, and quadratic functions. Is this limitation still in place? If so, it would be good to state such; if not, why was it removed?

_____ NC.M1.F-IF.6 - Calculate and interpret the average rate of change over a specified interval for a function presented numerically, graphically, and/or symbolically. The current standard and the first draft mentioned tables; the latest draft does not. Does "presented numerically" mean a table? If so, I don't think it more clear than just saying "table."

_____ NC.M1.F-IF.7 - Analyze linear, exponential, and quadratic functions by generating different representations, by hand in simple cases and using technology for more complicated cases, to show key features, including: domain and range; rate of change; intercepts; intervals where the function is increasing, decreasing, positive, or negative; maximums and minimums; and end behavior. This new standard is rather well written, but does seem like it would take several weeks of work for students to understand all of these for linear, exponential, and quadratic functions. The standard adds more representations and more key features. ('Tis quite a bit more than "Graph linear and quadratic functions and show intercepts, maxima, and minima.")

_____ NC.M1.F-IF.8 - Use equivalent expressions to reveal and explain different properties of a function. a. Rewrite a quadratic function to reveal and explain different key features of the function I think it would be helpful to specify what features dpi believes to be the key features that Math 1 students need to be able to reveal and explain. _____ NC.M1.F-IF.8b - b. Interpret and explain growth and decay rates for an exponential function The 1st draft had this standard moved to math 3. I think that makes sense. The more you include in math 1, the less likely the students will be good at the standards...

_____ NC.M1.F-IF.9 - Compare key features of two functions (linear, quadratic, or exponential) each with a different representation (symbolically, graphically, numerically in tables, or by verbal descriptions). It would be nice if the "key features" were specified. I know what I think are key features - but others may disagree - and dpi may have another interpretation. Just state what it is so the interpretation is not necessary. I do appreciate that the numerically is stated as "in tables" - why not do the same in NC.M1.F-IF.6 ?

_____ NC.M1.F.BF.1 NC.M1.F-BF.1a NC.M1.F.BF.1b - Write a function that describes a relationship between two quantities. a. Build linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two ordered pairs (include reading these from a table). b. Build a function that models a relationship between two quantities by combining linear, exponential, or quadratic functions with addition and subtraction or two linear functions with multiplication. Are recursive sequences removed? This new draft makes it seem that way to me. Since I am not sure, I would have to interpret the standard. Please just state whether the sequences are to be explicit, recursive, or both. Do you really expect math 1 students to build an exponential function given two ordered pairs? (Of course they could do a regression - but that is not "building" a function.) I am trying to figure out what kind of relationship that math 1 students would model by multiplying two linear functions. This standard seems to cry out for examples.

_____ NC.M1.F-BF.2 - Translate between explicit and recursive forms of arithmetic and geometric sequences and use both to model situations. Here it's specified to use both explicit and recursive to model situations which would seem like it could be done similarly in NC.M1.F-BF.1a . Is formal recursive notation now to be used - or is still informal notation used as in the current standard? I also don't it would be necessary to translate between them in math 1. It's already a part of Advanced Functions & Modeling; why make math 1 students do it?

_____ NC.M1.F-BF.3 The current standard dealt with vertical and horizontal translations only. The first draft had vertical translations (what happened to horizontal translations?) and vertical stretches only. The second draft says the standard is moved to math 2. Does this mean that

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horizontal and vertical translations of functions are moved to math 2 - or just the vertical stretches? I'm fine with the move to math 2 - though math 1 students didn't struggle too much with the vertical and horizontal translations. _____ NC.M1.F-LE.1 - Identify situations that can be modeled with linear and exponential functions; justify the most appropriate model for a situation based on the rate of change over equal intervals. This draft standard is much better written than the current standard.

_____ NC.M1.G-GPE.4 Use coordinates to solve geometric problems involving polygons algebraically, based on properties learned in elementary and middle grades: · Use coordinates to compute perimeters of polygons and areas of triangles and rectangles. · Use coordinates to verify algebraically that a given set of points produces a particular type of triangle or quadrilateral I assume this means to use side lengths to classify triangles and quadrilaterals. _____ G-GMD.3 Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems. latest draft is to move to math 3. As a math 1 teacher, I think this makes sense. I do think it could impact ACT performance if students don't get around to taking math 3 until the spring of their junior year - or later.

_____ NC.M1.S-ID.1 - Use technology to represent data with plots on the real number line (histograms, and box plots). dot plots are gone? (no objection.) It would likely requiring a purchase of some statistical software to represent data with technology as the TI-84 won't do so.

_____ NC.M1.S-ID.2 - Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets. Interpret differences in shape, center, and spread in the context of the data sets. This content is basically the first chapter of most AP Statistics courses. It takes a significant understanding to do well and describe in context. I would think this standard is optimistic at best. I would be fine with having math 1 students calculate measures of center of spread and comparing the values for different data sets - but to expect them to then interpret all these values and differences in context is not reasonable. (This is a math 1 course - not a statistics course.) _____ NC.M1.S-ID.3 Examine the effects of extreme data points (outliers) on shape, center, and/or spread. Once again, this sounds simple and easy. However, my AP Statistics students (who are considerably more mathematically sound than math 1 students) struggle with this for a while. Why make math 1 students feel like they are poor math students by giving them too much content and not enough time to master it? _____ NC.M1.S-

ID.6b - Represent data on two quantitative variables on a scatter plot, and describe how the variables are related. a. Fit a least squares regression line to linear data using technology. Use the fitted function to solve problems. b. Assess the fit of a linear function by analyzing residuals. Why would students in math 1 be used to assess the fit of the linear function by analyzing residuals? Wouldn't it make more sense for them to assess the fit of a linear function by analyzing the shape of the scatter plot? Once again, this is an important concept - for AP Statistics. _____ NC.M1.S-ID.6c - c. Fit a function to

exponential data using technology. Use the fitted function to solve problems. It appears that exponential regressions are now being added to math 1. I'm fine with this - as long as you remove enough content so that students have the time required to master this objective. It also implies that quadratic regressions are NOT added to math 1. If that is not the case, is should be listed. (It also would be helpful if it was stated that regressions are limited to linear and exponential.) _____ S-ID.8 Compute

(using technology) and interpret the correlation coefficient of a linear fit. moved to fourth level math. Thank you. _____ NC.M1.S-ID.9 Distinguish between association and

causation. Good grief. Sadly very few people in the world are able to distinguish between the two. Why would we expect math 1 students to be able to do so? (Politicians sure can't tell the difference. A report showed that there was an association between passing Algebra 2 in high school and successful life outcomes. Therefore Texas first and much of the rest of the country started requiring Algebra 2 to graduate.

Correlation does not mean causation!!!

Needs to keep circles

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<p>In theory integrated math should work well, but the standards are not taught consistently throughout our state. We also have a retention problem due to block scheduling in some schools. Therefore, a book for the entire state should be adopted and provided for each course to encourage consistency. The old Algebra 1, Geometry, and Algebra II goals were better because they were more specific.</p>
<p>The revisions to the standards are much better than the original wording of the standards. Concepts are better distributed with more needed to be taken out or added to.</p>
<p>The wording of NC.M1.A-REI.5 is confusing. Do you just mean solve systems using elimination and/or substitution?</p>
<p>Please dump Common Core and reinstate Algebra I, II, Geometry, Trigonometry, Calculus & Statistics.</p>
<p>Thank you for the opportunity to provide feedback. It is great to see North Carolina catching up to the rest of the world in the way we organize our math courses. Most other industrialized countries refer to all math courses as "maths". The topics are not separated into Algebra I, II and Geometry. Teachers are just getting used to this change, and we are progressing nicely. Please do NOT shift again and return to the old way of isolating skills into algebra and geometry courses!</p>
<p>I think that the revisions are great and would give the students a broader spectrum in math.</p>
<p>give schools the option of going back to the Algebra I, Geometry, and Algebra II sequence using these objectives</p>
<p>Where is the application of concepts? Teach formulas and worked problems, but where is the contextualization?</p>
<p>Watered-down version of good old Algebra I. Criteria for recommendation should be re-evaluated. Needs to be taught face-to-face. Middle school students who take it in the summer online aren't as prepared for Math II.</p>
<p>I don't really see any major changes here (which is a good thing). The CCSS are just fine. (It was the implementation in NC that was the problem.) I work with HS teachers on a regular basis and most are happy with what they are now teaching in MATH 1, 2. It's MATH 3 that is a mess.</p>
<p>Return to traditional course of Algebra 1.</p>
<p>By focusing more on specific content the relevancy will be there for students and teachers.</p>
<p>I think the draft is a better fit, especially for students who are coming from 8th grade into high school. The change is better to understand and the flow of the math is better. I hope that this draft gets approved!</p>
<p>My only issue is that the standards continue to change which does not allow teachers to become comfortable with the standards and they continue to try to hit a moving target. I agree the standards need to meet the needs of the students. But can we please settle on one thing for a few years to build capacity of the teachers and be able to hit a stable target?</p>
<p>Functions in MATH 1 should focus on a natural progression from linear to exponential functions. Linear piecewise functions such as absolute value and step functions should also be addressed. A study of quadratic functions should wait until MATH 2.</p>
<p>The proposed draft revisions provide a more coherent and focused course due to the clarity of the standards.</p>
<p>This should be Algebra I. Mixing in geometry invites confusion.</p>

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As parent feedback, I will ask you.... Have you discussed the entire MATH program for high school with those schools across the USA who have an excellent Math program? You've indicated that you've asked math teachers across the STATE, but how about the rest of the USA? I have found that overall, a public education from NC is very far below, in most categories, than other high schoolers across the nation. Henceforth; when NC students go to college, they are typically not on "par" with the rest of the nation's public school programs. Seek out what systems work and design around those. quick note: my other child attends a private school and his curriculum is from Alpha Omega - Ignitia on-line program..... That stuff is tough. He's a math whiz and some of the concepts were quite challenging for him. I ask for you to look at what that program is teaching High School mathers. We need to challenge our kids not give them the bare basics - as is what is typical of a NC education.

1. Students are going to prove geometric theorems algebraically in Math 1 before "Introduce Proof" in Math 2? 2. How will students do distance formula in Math 1 (which requires square root) before they have square root in Math 2?

A.SSE.1,2 - Still vague, needs rewording F.IF. 4, 8 - Relative Min and Max should only be addressed in 4th math class

Change the name back to Algebra 1.

F.LE.3 is beyond Math I. It's too early to have students conceptualize end behavior, as opposed to recognizing the difference in growth patterns. S.ID.9 Should be pushed to Math II when students have a firmer understanding of linear regressions. Having students who struggle with the concept of slope determining the differences between association and causation is premature.

I am guessing the new version of the standards explains better the "Functions" do be covered in Math I.

I am responding to this survey on behalf of my district, Orange County. Overall, teachers are comfortable with the changes that have occurred in Math 1. The biggest concern has to do with the coordinate geometry component of this course for two primary reasons in lack of preparation which has many of its own reasons. First, students do not have a strong understanding of definitions in geometry and with basic tenets in proof so thinking about proving that you have a parallelogram can be challenging for students. Second, students for a variety of reasons, still are coming to Math 1 unprepared to handle graphing lines. Therefore teachers are spending time building this piece up and have less time to concentrate on the coordinate geometry unit. I am still personally concerned that we continue to not spell out in the standards compound inequalities and absolute value equations and inequalities. I feel like we have an obligation to cover these topics because the ACT covers them and they connect well to early ideas in logic. We will be building this into our district units regardless this next year. However, it would be nice to have this articulated into Math 1 or Math 3.

I see that addition/subtraction of matrices, as well as scalar multiplication is being moved to Math 8. I do not recall seeing matrix multiplication, determinants, inverses, or solving systems with the assistance of matrices in any of the curricula. Matrix multiplication is used in transformations and as a tool to find area of triangles in the coordinate plane. Where will this be taught?

If we include matrices please then do it for systems. No need to teach arithmetic operations but not how it can be applied. Include quadratic formula for quadratics. Teach it all that way.

In high school, Math 1 should be a year long course - not a semester. Too much to cover in too little time.

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In terms of functions, it has been my experience as a parent and as an educator that students need Math 1 to have a very solid exploration of linear functions and little else. Quadratic functions seem to be an acceptable reach also, but the jump to exponential proves difficult for students year after year. I would love to see all of exponential moved to Math 2 or 3 and allow Math 1 to focus on linear and quadratic in depth. On a side note, this would also allow for Math 1 to place more emphasis on number sense, which is a struggle and this lacking hinders students in every year of Math subsequently.

In the first draft of the standards, there were more specifics given for some standards. I thought this was helpful, however these were taken out in the second draft.

Math I should NOT include Matrices. Students in 8th grade Math I can't understand this. You have to remember when you change standards, not only are you changing for high school age students, you are impacting 8th graders as well. Please do NOT include this in our standards.

Math I should only focus on Linear and Quadratic functions

Matrices seem to go in and out. I like them in Math 1. I would like to see some discussion of absolute value. I do not like the idea that it is not used prior to Math 3. That seems so late. At least the concept of absolute value needs to be introduced and discussed.

Moving the solving of factors to math 1 is a great idea.

none

Overall the revisions to Math 1 are beneficial to student learning of mathematics. The regrouping, rewording, and clarifications will positively affect teachers' understanding of the intentions of the standards. I believe the integrity of the standards is kept and the focus on understanding mathematics, essential to common core standards, is kept in the revisions. Summary, Overview, and Rationale Comments: 1) The sentence, "The goal of NC Math 1 is for students to develop a thorough understanding of linear functions as they begin...", seems to be more appropriate in the Functions conceptual category. The Algebra progressions document references a focus on operations with algebraic expressions and their parallelism to operations/arithmetic with numbers. This should be more emphasized in the overview. 2) The following sentence, where operations are mentioned, "The focus in NC Math 1 is on these three equations and the operations involved with them." The way this is written, it includes operations with exponentials. Algebraic operations with exponentials isn't in Math 1, however they will be solved and inspected with tables and graphs. Standards Comments: A.SSE.1b - The wording of this needs to be consistent with the wording from Math 2 and Math 3 to the same corresponding standard. I prefer the wording used in Math 2 and 3.

Quadratics should be moved to be completely contained in Math 2

The introduction of Matrices is a great addition. Not sure introducing Complex numbers in Math 1 is the right place...I think it matches the Math 2 curriculum better.

This course looks very good to me.

Though I did not read the Math 1 standards with as great detail, I did notice that for Math 1 under A-SSE.1a.b, we are to cover quadratics; however, quadratics are also to be covered under the same standard in Math 2. Is there supposed to be overlap here?

To much to cover in one course

We are happy with the improved rigor of common core standards but are continually shocked by the remarkably poor quality of the teaching materials. We find content/editing errors regularly. We, the state of NC, should have financial recourse with the organization/organizations providing teaching material to our children.