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Separate School-Specific Documents being provided:

- Mid 1st-semester Math-Grade-To-Date Summary Reports for Current Freshmen
- Surveys completed by Current Freshmen for their 8th grade teacher

2019-20 Possible Freshman Math Courses at District 99

1. “Foundations for Math 1”

This is essentially Grade 8 Common Core Math and is the lowest-level regular education math class which is offered in District 99. Students that will not successfully complete a mainstreamed Common Core 8 full course as eighth graders should be recommended for this course.

2. “Math 1”

This is the standard college-track freshman math course and is the foundational class for the rest of the high school curriculum sequence. This course is structured around the Common Core Standards for Mathematics Integrated Model – students will extend their work from middle school in the areas of Number & Quantity, Algebra, Functions, Geometry, and Statistics within this course.

If a student is taking a traditional Algebra class in junior high / middle school during the 2016-17 school year, they have the following options entering into District 99:

- *take Math 1 in summer school to enroll in Math 2 as a freshman in Fall 2017*
- *transition into Math 1 in Fall 2017*

*Enrollment in Math 2 without completion of an integrated Math 1 course is **not** recommended as an appropriate placement, due to the amount of content in Math 1 that is not present in a traditional algebra course. Parents may enroll a student into Math 2 by completing the department override process.*

3. “Math 1S”

This is the same course in terms of curriculum, rigor, and learning expectations, but with one-and-a-half-periods of instructional seat time each day. Please ensure that this recommendation is based upon ability and/or slower processing capabilities, not effort. If students are not being successful because of a lack of effort, providing additional seat time is not a support that would benefit them.

In addition, students entering at any level of Math 1 need to have solidified the common core grade 8 standards before moving on to this course!

4. **“Math 2”**

Recommend this course for students that:

- are enrolled in an 8th grade Math 1 class that will have covered the full scope of the District 99 Math 1 curriculum by the end of the year
- have successfully completed a Math 1 course with a 1st semester grade of C or higher
- are not honors level math students – please see the Honors Characteristics page later in this packet for more guidance in this area!

5. **“Math 2H”**

This is the honors-level Math 2 class. This course is designed for very strong math students that have received an A in Math 1, are looking for the challenge of an honors class, and possess the dispositions listed on the Honors Characteristics page included in this packet.

6. **“Math 3” or “Math 3 Honors”**

For those schools that have a cohort of students take and successfully complete a full Math 2 course as 8th graders this current school year, these course options will be available for their placement as 9th graders at DGN.

If you have any questions about these summaries or the course description document itself, please don't hesitate to contact the Math Department Chairs – email is quickest initial means of communication for us.

General Guidelines for standardized test scores and correlations to math course placement for incoming freshmen in District 99.

Math course entry point for freshmen	EXPLORE	MAP	STAR	I-READY
Foundations for Math 1	10-12	212-221	675-733	466-482
Math 1S (extended time model)	12-15	219-230	726-798	482-506
Math 1	15+	230+	798+	500+
Math 2	17+	236+	842+	521+
Math 2H (honors)	21+	250+	929+	540+

- If a student has taken more than one type of standardized test, both data points will be considered as part of the course placement process in D99.
 - EXPLORE-to-MAP linkage is correlative ($r=0.77-0.82$) and based on D99 student data from previous incoming freshmen classes
 - MAP-to-STAR linkage is correlative ($r=0.83-0.92$) and based on an October 2014 study by Renaissance Learning©
 - MAP/STAR-to-IREADY linkage is based upon crosswalk analysis completed by the creators of the I-Ready test in a 2017 study.

- Test scores are used in conjunction with other data points (teacher recommendation, current course enrolled, quiz/test scores, etc.) as part of the overall incoming freshmen placement process.

- On the new Google-based recommendation form, the following options will be available for 8th grade teachers to choose from – please place an X in **only one column** out of these options.
 - *Foundations for Math 1*
 - *Borderline between Foundations for Math 1 & Math 1*
 - *Math 1-S*
 - *Borderline between Math 1-S & Math 1*
 - *Math 1*
 - *Math 2*
 - *Math 2 Honors*
 - *Other*

- Anecdotal feedback is CRITICAL and will be taken into consideration – thank you in advance for providing any details about individual students, to assist us with not only the placement process but also to be able to refer to once the year begins when possible course or level changes are being considered.

Notes:

North High ~ Honors Mathematics

Honors Math Program Description

The Mathematics Honors Course Sequence is offered as an opportunity for students to experience increased depth and rigor of topics and concepts. Honors math students tend to be interested in mathematics, enjoy a challenge, and quickly see connections. Honors math classes develop concepts from a more theoretical perspective, use less directive teaching strategies, and require a greater level of student independence. Teachers make recommendations for honors classes based on observations and assessment data. All honors and AP courses are grade-weighted.

Profile of Honors Math Courses

- Teacher often serves as a facilitator of student-owned collaborative knowledge-building
- Concepts developed from a more theoretical perspective
- Application of concepts/theorems/formulas is emphasized
- Independent projects and outside-of-class mathematical endeavors required
- Greater out-of-class workload compared to non-honors math courses
- Course content includes:
 - Core-defined curriculum
 - More challenging extensions/problems of the core curriculum
 - Additional topics covered solely at the honors level

This approach results in a faster progression through portions of the core curriculum

Characteristics of a Successful Honors Math Student

- Displays the desire to seek true mathematical understanding, not simply 'get the grade'
- Understands the power of productive struggle and enjoys learning challenges
- Independently able to make connections, and does so quickly
- Willing to take risks in collaborating with peers to create knowledge and critique arguments
- Committed to homework and displays disciplined study habits
- Clearly articulates formal mathematical methods
- Takes greater responsibility for ownership of the learning process as an independent and mature student
- Able to manage heavier workload without undue stress or frustration
- Seeks out and utilizes resources independently when needed
- Takes advantage of re-assessment opportunities provided by the instructor when not meeting a minimum level of performance

Placement Requirement into Honors Math

Teacher recommendation OR signed override form by student & parent during registration process

Calculator Expectations for Incoming Freshmen

District 99 Mathematics

The purpose of this document is to provide teachers of 8th grade mathematics with accurate information regarding technology expectations in mathematics for students that will be attending District 99. Although students have been provided Chromebooks and thus have access to different graphical tools online for exploratory purposes, the Chromebook will not be allowed on most quizzes/tests; thus, students need access to calculators during both instruction and assessments.

If an incoming freshman enrolls in *Foundations for Math 1*, there is a requirement that every student has their own personal scientific calculator – calculators with a fraction key such as the TI-30X model are strongly recommended.

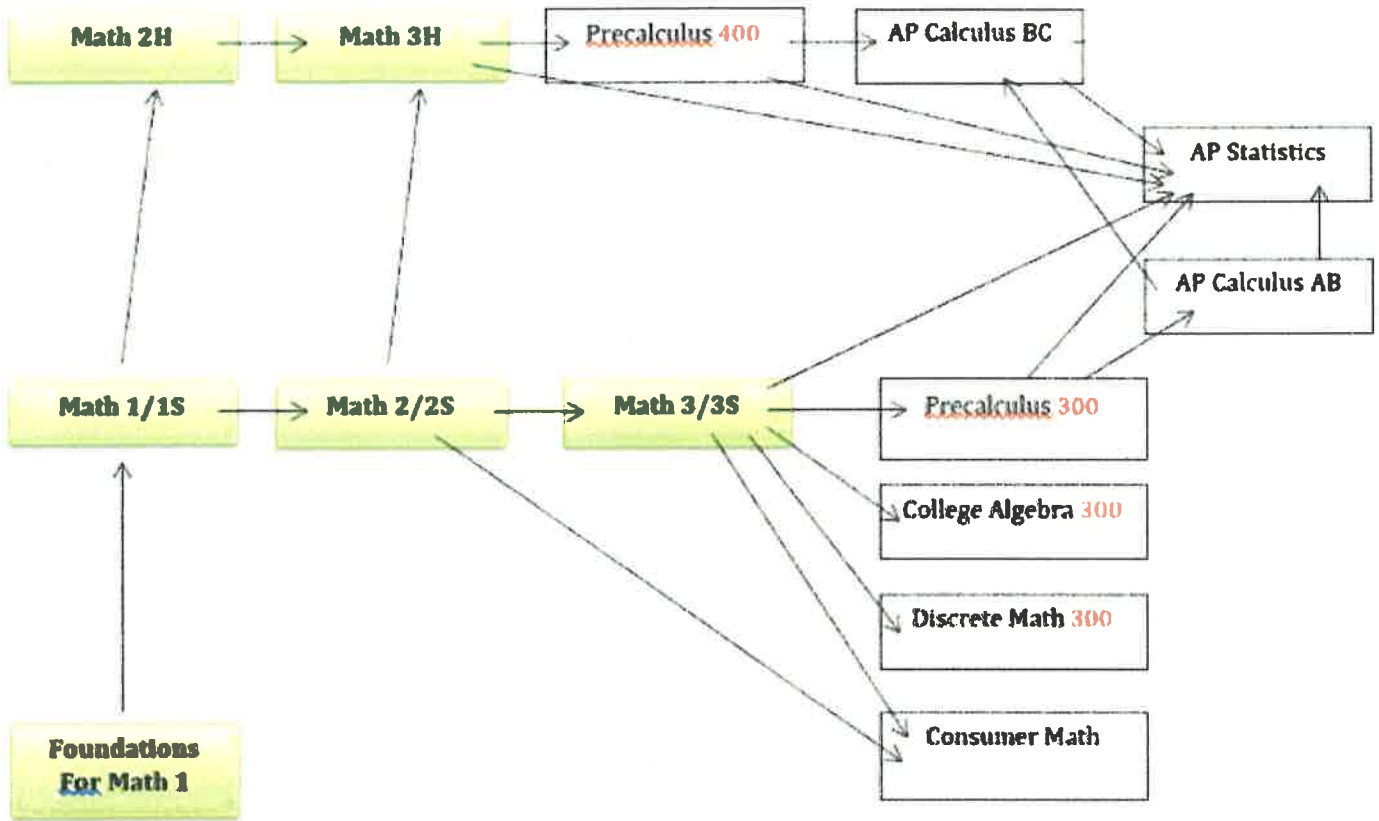
If an incoming freshman enrolls in any of the following courses, there is a **requirement** that every student has their own graphing calculator:

- Math 1
- Math 1S (extended period)
- Math 2
- Math 2H (honors)

The ***TI-84 Plus Silver Edition*** is the recommended model of graphing calculator. However, all of the following models are also acceptable:

- TI-83
- TI-83 Plus
- TI-84
- TI-84 Plus
- TI-84 Plus C
- TI-84 Plus C Silver
- TI-84 Plus CE
- TI-Nspire *non-CAS* model

District 99 Mathematics Curriculum Map



Common Core Mathematics Implementation in District 99

Summary Information

Shortly after the state of Illinois adopted the *Common Core State Standards in Mathematics* in July 2010, we in District 99 Mathematics began our planning for implementation:

- During the 2010-11 school year, we processed and analyzed the Mathematical Practices and High School Content Standards. **A copy of the Mathematical Practices, or “habits of mind,” can be found on the next page of this packet.**
- During the 2011-12 and 2012-13 school years, we more formally focused on implementing some of the Mathematical Practices in greater detail in our lesson design; however, no curricular changes occurred.
- Starting in 2013-14 with the incoming Class of 2017, major curriculum changes began starting with Math1 and Math 1S. During 2014-15 the changes expanded to include Math 2/2S/2H, and in 2015-16 to include Math 3/3S/3H.
- From the 2016-17 school year and beyond, the curriculum sequence map on the previous page represents Mathematics coursework in District 99.

Since beginning this process, the critical learning that we have experienced is that **implementing both the Practices and the Curriculum that the *Common Core Standards* document outlines will require significant curricular revision at all grade levels, as well as philosophical shifts for many teachers.**

The *National Council of Supervisors of Mathematics* (NCSM) has recently released tools to assist schools K-12 in a) re-analyzing their mathematics curricula and b) evaluating new textbooks through the lens of Common Core. **These resources can be found at <http://www.mathedleadership.org/ccss/materials.html>**

In addition, we have found the following websites to contain very beneficial information regarding Common Core Standards analysis and implementation:

- <http://www.corestandards.org/>
- <http://insidemathematics.org/index.php/common-core-standards>
- http://www.ccsso.org/Resources/Digital_Resources/Common_Core_Implementation_Video_Series.html
- <http://www.mathspecialists.org/index.html#Fdf>

CCSSM Mathematical Practices in Action – Guiding Document for Teacher Implementation & Fostering of the “Habits of Mind”

1. **Students that make sense of problems will:**

- Explain to themselves the objective of a problem, and what a reasonable answer might look like
- Analyze givens, consider constraints, and determine what the problem is ultimately asking them to find
- Consider similar/comparable problems in relation to the original
- Try special cases and simpler forms of the original problem
- Check answers achieved
- Ask themselves “does this answer make sense in the context of the application?”
- Understand different approaches that others take to solve complex problems

2. **Students that persevere during problem solving will:**

- Take ownership of the problem
- Revisit a problem if initial attempts to solve are unsuccessful
- Work through a problem until a solution is reached while effectively coping with challenges during the solving process
- *Students* take responsibility to finish a problem

3. **Students that reason abstractly will:**

- Break down a given situation, represent it symbolically, and manipulate the representing symbols to arrive at a solution
- Transition between multiple representations of a problem: words, symbols, tables, graphs, & drawings

4. **Students that reason quantitatively will:**

- Create a coherent specific representation (equation, expression, visual, etc). of the problem at hand
- Consider the units involved in a problem
- Attend to the *meaning* of quantities, not just how to compute them.

5. **Students that construct viable arguments will:**

- Make conjectures/predictions
- Build a logical progression of statements in order to explore the validity of a conjecture
- Recognize and use counterexamples to make or refute a claim
- Justify conclusions with mathematically-sound descriptive arguments, including appropriate mathematical vocabulary, definitions, and theorems

6. **Students that critique the reasoning of others will:**

- Compare the effectiveness of two possible arguments
- Distinguish correct logic or reasoning from that which is flawed
- Explain flaws in logic or reasoning when they exist
- Ask useful questions to clarify or improve an argument made by others.

7. **Students that engage in modeling with mathematics will:**

- Solve problems arising in everyday life, society, and the workplace
- Create physical objects/representations that are mathematically accurate

8. **Students that use appropriate tools strategically will:**

- Possess *knowledge of* available tools, including but not limited to pencil/paper, concrete models, ruler, protractor, compass, calculator, spreadsheet, CAS, statistical packages, and dynamic geometry software
- Make sound decisions about *when* certain tools might be helpful and efficient, recognizing the limitations of each
- Identify relevant *external resources*, such as digital content located on a website, and use them to pose or solve problems
- Use *estimation* as a tool

9. **Students that attend to precision will:**

- Use clear definitions in verbal discussion and in writing
- State the meaning of the symbols and variables they choose
- Use all math symbols consistently and appropriately
- Specify correct units of measure on variables and contextual answers
- Label axes to clarify the correspondence between quantities in graphical representations
- Express numerical answers with a degree of precision appropriate for the problem context

10. **Students that look for and make use of structure will:**

- Look for and identify patterns or an underlying structure within a problem
 - a) Ex: Sorting a collection of shapes according to how many sides they have
 - b) Ex: In the expression $x^2 + 9x + 14$, view the 9 as $2+7$ and the 14 as $2\cdot 7$
- Apply basic algebraic principles to more complicated problems
Ex: $\cos^2 x + 3 \cos x + 2 = 0$ correlates to $x^2 + 3x + 2 = 0$

INCOMING FRESHMAN PARENT OVERRIDE WAIVER
ALTERNATE COURSE PLACEMENT Class of 2023
District 99 – North High Mathematics

The current math course in the DGN registration system for your child was input by the Department Chair. In many cases, this course is analogous to that recommended by your son/daughter's middle school teacher. However, in some cases data such as grades, standardized test scores, scope of the curriculum in which the student is currently enrolled, and/or other factors lead to an alternate placement by the Chair.

If you wish to enroll in a course different from that currently programmed in our system, please read and sign this form. Also, if you are considering honors, information about our honors program can be found on the back of this page.

Once the school year has begun, a request to move to a different course altogether must occur by the 4-week mark of the semester.

A request to move down a level/model of the same course will *only* occur at the 4-week or 7-week mark of the first semester, or in-between semesters. Additionally, **all** of the following must be true:

- The student has demonstrated an attempt to regularly participate in-class and to complete all assigned work since the start of the school year.
- The student has initiated, on several occasions, getting extra assistance from the teacher of their class.
- The student has attempted, on several occasions, to seek additional assistance from other sources, such as coming to the Math Resource Center, STRIVE, peer tutoring, or other similar interventions.
- There is an available seat in the class & period that the student is requesting to move into.

If you desire to enroll your child in a course different from the one currently entered, please complete the bottom of this form and then return it in any of the following ways:

- to the counselor at Registration on Saturday, February 3rd (if the form was received prior to that event)
- scan and send via email attachment directly to the Department Chair, or
- drop-off in paper form at the North High Main Office

This form must be received **no later than 3:30 p.m. on DATE TBD.**

Please do not hesitate to contact Mr. Jon Heldmann, Department Chair, at 630-795-8131 or jheldmann@csd99.org regarding any questions you have or clarifications you might need.

Student Name (printed) _____ DGN ID# _____

Course requested: _____ Counselor: _____

Student Signature: _____

Parent/Guardian Signature(s): _____

**COMMUNITY HIGH SCHOOL DISTRICT 99
NORTH HIGH MATHEMATICS DEPARTMENT**

TO: All Fall 2018 Freshmen Math Students @ DGN

Your 8th grade teacher would like to know how you are doing in math in high school. Please complete this form in-class today and return it to your current math teacher. We will then deliver them to the middle school you attended ☺

1) First & Last Name _____

2) Junior High or Middle School you attended last year _____

3) Your 8th Grade Math Teacher's Name _____

The following questions relate to you **this year at DGN**:

4) The name of my *current* math class is _____

5) My *overall* grade up to this point in the year is (circle one): A B C D F

The score I earned on my *most recent quiz or test* was (circle one): A B C D F

6) Did you transfer to a different math course since the start of this school year? Yes _____ No _____

If yes, to what course did you *start* in? _____

7) What do you **like** best about Math *this* year?

8) What is **most challenging** for you in Math *this* year?

9) How well did you **feel prepared** for your math class *this* year?

10) Any other respectful comments you wish to share with your 8th grade math teacher:

For DGN Freshman Math TEACHER use only:

Based on my work with this student thus far, I feel their placement was:
Appropriate ___ Borderline too high ___ Too high ___ Borderline too low ___ Too low ___

Comments /clarifications (if “too high” or “too low” was selected above):