March 23, 2015

7-12 Mathematics Bulletin
Rochester City School District

Mathematics: A Tool to Solve Rigorous, Non-routine, Real Life Problems

Math Curriculum Updates for Grades 7 and 8

Grade 7 PACING	Grade 8 PACING	Math 7-H Accelerated Pacing	OnRamp	Performance Level Descriptions	Released Sample Items	NYS Math Testing Guides
Module 1 Guidance Document	Module 1 Guidance Document		Math 7 OnRamp Pacing	Math 7 PLD	Math 7 Released Items	Math 7 Testing Guide
Module 2 Guidance Document	Module 4 Guidance Document		Math 8 OnRamp Pacing	Math 8 PLD	Math 8 Released Items	Math 8 Testing Guide
Module 3 Guidance Document	Module 5 Guidance Document					
Module 4 Guidance Document	Module 6 Guidance Document					
Module 5 Guidance Document	Module 2 Guidance Document					
Module 6	Module 3					
	Module 7					

Grade 7 Teachers- You should be into through Module 5.

Grade 8 Teachers- You should be into Module 3.

If you are not at these points yet, do not panic. I would be happy to meet with you to discuss your pacing in accordance to your students' needs and Performance Level Descriptions to ensure the best use of your instructional time. Pacing for Math 7 OnRamp and Math 8 OnRamp have been restructured to better fit the content of the pacing of the modules. I am very willing to help you recalibrate your pacing to your students' needs. Please contact me at 262-8741 or jeff.mikols@rcsdk12.org

Math Curriculum Updates for Grades 7 and 8 (continued)

PARCC TEST ITEMS!

NYS MATH TESTS ARE 16 DAYS AWAY!

MAKE SURE THAT YOUR SCHOOL HAS ENOUGH SCIENTIFIC CALCULATORS, RULERS, AND PROTRACTORS FOR EACH STUDENT!

NYS Math 7 & 8 Tests are April 22-24, 2015

April 22-Book 1
28 Multiple choice questions, students have up to 80 minutes
Students may NOT use scientific calculators on Book 1

April 23-Book 2
27 Multiple choice questions, students have up to 80 minutes
Students MUST be given their own scientific calculator on Book 2

April 24-Book 3
6 short response questions and 4 extended response questions, students have up to 90 minutes
Students MUST be given their own scientific calculator on Book 2

Tools:
Students in Grade 7 and 8 must have a ruler and protractor for their exclusive use for all sessions of the test. Students with disabilities may use adapted rulers if this is indicated as a testing accommodation on the student's Individualized Education Program or Section 504 Accommodation Plan.

Reference Sheets: Please make sure your students have been instructed how to effectively use reference sheets supplied with exam. Reference sheets can be found on last page of testing guides.

Domain-Test level Blueprint (% of Test Points for 2015 Exams)

Domain	Grade 7	Grade 8
Expressions and Equations	30-40%	40-45%
Functions		25-30%
Ratios and Proportional Relationships	20-30%	0%
Geometry	5-15%	20-25%
Statistics and Probability	10-20%	10-15%
The Number System	15-25%	0%

For complete information regarding testing, please access NYS MATH 3-8 TEST GUIDES

Effective Test Taking Practices for Multiple Choice and Open Ended Questions on NYS Math 7-8 Exams

The Goal: To reduce frustration and increase achievement on NYS 7-8 Math Exams

The Problem: Students typically answer questions in the order they appear on the exam. If they get stuck on a particular question, it is not uncommon for students to spend an exorbitant amount of time trying to answer one question or they may get frustrated to the point that they are not effectively answering subsequent questions.

The Simple Solution: "Three Passes" Through Multiple Choice and Open Ended Strategy. Students can systematically cover an assessment and produce their best work efficiently.

Pass 1: Students will know how to do a significant number of items on the assessment. The ***first*** pass through the assessment should be to start at the beginning of the exam and find all of the questions they know well and can complete quickly and accurately. **Students must reread the question and make sure they are answering what is being asked.** This pass should comprise approximately 70-80% of the testing time.

Pass 2: The ***second*** pass through the assessment should be find questions they do not know as well, but through careful reading and limited knowledge of the concept, can eliminate one to two distractors (Multiple Choice) that they know are incorrect. Students can then use reasoning skills, working backwards, or estimation to locate the correct answer. **For open ended questions, students should show any relevant work that may earn them partial credit**. This pass should comprise approximately 10-15% of the testing time.

Pass 3: Students should use the remainder of the time to make sure that no multiple choice questions are left blank. Through different strategies a student may be able to eliminate one distractor as incorrect and then make an educated guess. A blank is ALWAYS wrong!

-STUDENTS SHOULD USE THEIR ENTIRE TIME!
-PROFICIENCY WITH THE SCIENTIFIC CALCULATOR IS VITAL FOR BOOKS 2&3
-STUDENTS MUST KNOW HOW TO USE A REFERENCE SHEET

Math Curriculum Updates for Algebra 1

Algebra 1	Algebra 1 Math Lab	Performance Level Description	Released Regents Exams	Algebra 1 Test Guide
PACING	PACING	Algebra 1PLD	June 2014 Annotated Items	
Module 1			August 2014	
Module 3			January 2015	
Module 4				
Module 2				
Module 5				

IMPORTANT!!!

NYSED has extended the Integrated Algebra Regents Exam through June, 2015

The following students may take the Integrated Algebra Regents Exam in June 2015:

-students enrolled in Algebra 1 during the 2013-14 school year
-students who were enrolled in Integrated Algebra during 2012-13 or prior.

As of right now NYSED has stated that this option is NOT open to students who are enolled in Algebra for the first time this year. That would include most of our new ninth grade students. I will provide more information as it becomes available from NYSED.

Remember to enroll your students preparing for the January or June Integrated Algebra Regents Exam on Online Regents Review for Integrated Algebra found on elearning. Please contact me if you have any questions on how to do this.

PARCC TEST ITEMS!

These items are great resources to infuse into your lesson plans and problem sets.

Algebra 1 Teachers- You should now be well through Module 4.

If you are not at there yet, do not panic. I would be happy to meet with you to discuss your pacing in accordance to your students' needs and Performance Level Descriptions to ensure the best use of your instructional time. I am very willing to help you recalibrate your pacing to your students' needs. Please contact me at 262-8741 or jeff.mikols@rcsdk12.org

General Findings from January 2015 Algebra 1 Common Core Regents Exam

Findings

-Sample of ten items had a lexile level of 1150
-26 of 37 items contained more than one sentence of text
-19 of 37 items contained more than two sentences of text
-MANY Questions are multistep and require careful reading to get correct
-7 of 13 items in Parts 2, 3, and 4 required an explanation or a justification
-5 of 13 items in Parts 2, 3, and 4 required students to write an equation or inequality from context
-6 of 37 items required graph interpretation or graphing a function
-4 of 37 items required analyzing a table of values
-6 of 37 items required factoring a quadratic expression or solving a quadratic equation
-10 of 37 items required analyzing a linear function or solving a linear equation or inequality
-5 of 37 items required analyzing an exponential function.

Implications

-Practice with released Regents questions frequently
-Use Close reading strategies to gain better understanding of the text
-Use error analysis with actual Regents questions and scoring rubrics so students know what good answers look like
-Infuse more activities in the classroom requiring justifications and explanations. Even in multiple choice questions, students should explain how -they know their selection is correct
-Model multistep solutions. Use Think Aloud. Let students see and hear how an expert thinks through a difficult task
-Continue to have students work on graphing calculator skills
-use strategies to improve student vocabulary (word walls, silent teachers, journals, etc)

Math Curriculum Updates for Geometry

Geometry-R	Geometry	Geometry Test Guide
PACING		Geometry Released Sample Items
Module 1 **Guidance**	**Module 1** **Guidance**	NEW SAMPLE ITEMS RELEASED IN DECEMBER!
Module 2 **Guidance**	**Module 2** **Guidance**	
Module 3 **Guidance**	**Module 3** **Guidance**	
Module 4	**Module 4** **Guidance**	
Module 5	**Module 5**	

IMPORTANT: There will be TWO six point questions on the Geometry Common Core Regents being administered on June 2, 2015 instead of one. There will not be a change in the number of points, as one 2 point question and one 4 point question will be eliminated. Please access the link below for the new Geometry Regents Test Guide.

https://www.engageny.org/resource/regents-exams-mathematics-geometry-test-guide.

PARCC TEST ITEMS!

These items are great resources to infuse into your lesson plans and problem sets.

Geometry-R Teachers- You should now be into Module 4.

If you are not at there yet, do not panic. I would be happy to meet with you to discuss your pacing in accordance to your students' needs to ensure the best use of your instructional time. I am very willing to help you recalibrate your pacing to your students' needs. Please contact me at 262-8741 or jeff.mikols@rcsdk12.org

NOTE: Students enrolled in Geometry R will take the Geometry Common Core Regents Exam on June 2 as well as the Geometry Regents based on 2005 Performance Indicators on June 19.

Math Curriculum Updates for Algebra 2 and Trigonometry

Algebra 2	Algebra 2 With Trigonometry R	Algebra 2 With Trigonometry R-Honors
PACING	PACING	PACING

Common Core Aligned Algebra 2 Modules from Engageny.org

Module 1: Polynomial, Rational, and Radical Relationships
Module 2: Trigonometric Functions
Module 3: Exponential and Logarithmic Functions
Module 4: Inferences and Conclusions from Data

PARCC TEST ITEMS!
These items are great resources to infuse into your lesson plans and problem sets.

Mathematics: Standards for Mathematical Practice

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important "processes and proficiencies" with longstanding importance in mathematics education. The first of these are the NCTM process standards of problem solving, reasoning and proof, communication, representation, and connections. The second are the strands of mathematical proficiency specified in the National Research Council's report *Adding It Up*: adaptive reasoning, strategic competence, conceptual understanding (comprehension of mathematical concepts, operations and relations), procedural fluency (skill in carrying out procedures flexibly, accurately, efficiently and appropriately), and productive disposition (habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one's own efficacy).

Math Classroom Videos of Math Practices In Action from Insidemathematics.org

1. Make sense of problems and persevere in solving them. CLICK HERE

2. Reason abstractly and quantitatively. CLICK HERE

3. Construct viable arguments and critique the reasoning of others. CLICK HERE

4. Model with mathematics. CLICK HERE

5. Use appropriate tools strategically. CLICK HERE

6. Attend to precision. CLICK HERE

7. Look for and make use of structure. CLICK HERE

8. Look for and express regularity in repeated reasoning. CLICK HERE

Close Reading Strategies in Mathematics

Through Math Council 9-12 and in collaboration with Brenna Farrell, 4-12 ELA Director, we have identified a method for getting students to read math text, especially word problems, more carefully

1. READ the problem ***at least*** TWICE. First read is to gain familiarity and context.

2. Second read, use either CUBES or BUCSS. The idea is to ***SLOW DOWN THE READ***. CUBES or BUCSS is an acronym students can use to better make sense of the text. Both strategies involve students identifying WHAT the task is asking students to produce for an answer FIRST. This is critically important since a student who knows what the outcome must be will be better equipped to make sense of the information embedded in the text. Students will then identify key vocabulary and numerical information, including perhaps, which information is NOT critical to solving the problem. Students are then asked to make sure that their answer makes sense.

   You may have a different acronym you use for students doing CLOSE reads. Please continue to use it if you are having success with students in reading math in context. Thank you for your efforts!

Box the portion of the question that gives you the specific task (or tasks) you must provide an answer for
Undeline important (Numerical) information
Circle important vocabulary
Show your answers (in words, numbers or models- including tables, graphs, functions…)
Sense? Check that your answer makes sense.

or

Circle the portion of the question that gives you the specific task (or tasks) you must provide an answer for
Undeline important (Numerical) information
Box in important vocabulary
Evaluate—solve an equation, find the value of an an expression, etc to produce an answer
Sense? Check that your answer makes sense.