

Algebra 1 Common Core Regents Exam Transition

Discussion Paper Update

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Highlights:

- *11,340 more students failed the Algebra Regents in 2016 than in 2014. The just released New York State Education Department (NYSED) Report Card 2015-16 shows that statewide the Algebra 1 Common Core Regents passing rate is now comparable with the old Integrated Algebra Regents passing rate. However, an examination of the 2015-16 test scores must include both the Common Core Algebra 1 and Integrated Algebra test results added together. Unless this step is taken, the spike in the number of students remains hidden in the percentage comparison.*
- *Since around 28,000 more students with 8th Grade Level 1 Math scores have been entering high schools across New York State each year since the Common Core based testing began, an increase in the number of students failing the Algebra Regents exam was inevitable.*
- *115,589 students took the Integrated Algebra Regents Exam in 2014-15. Of this group, 44,414 students did not get a passing score of 65. Most of these students entered high school either in 2011 or 2012 and NYSED allowed them to continue with the Integrated Algebra Regents (instead of the Common Core Algebra Regents). In 2015-16, only 17,585 students took the Integrated Algebra Regents. What happened to the other 26,839 students that failed the Integrated Algebra Regents in 2014-15? Did they give up on getting a Regents Diploma?*
- *Unless NYSED takes significant measures, the graduation rate is at risk of dropping dramatically after years of steady increases. One promising initiative is NYSED's Expanding Graduation Pathways for all Students. One part calls for developing a project based assessment system for students who have failed a required Regents exam more than once. NYSED officials have requested \$8 million in the budget to implement a project based assessment system. A project based assessment system could be a viable way to help these students and maintain graduation rates.*

**Comparison of 2013-14 and 2015-16 Algebra Regents Exams Test Scores
for Students Scoring Below 65/Not Passing**

Test score below 65/not passing	2012-13 Integrated Algebra	2013-14 Integrated Algebra		2015-16 Combined Integrated Algebra and Common Core Algebra I	Increase between 2014 and 2016	% Increase between 2014 and 2016
All Students	75,370	74,528		85,868	11,340	15%
Students with disabilities	24,638	26,206		30,442	4236	16%
English Language Learners	12,513	11,886		14,805	2919	24.5%

Source: New York State Report Cards 2012-13, 2013-14 and 2015-16

- For 2015-16, both Common Core Algebra 1 and Integrated Algebra test takers must be counted:**
 A closer analysis of the just released [2015-16 New York State Regents Exams](#) test scores show that the number of high school students failing the Algebra Regents exam has grown significantly from the old Integrated Algebra exam. In addition to the 78,558 students that did not pass the Common Core Algebra 1 Regents exam, there are another 7,310 more students (almost all high school seniors) that did not pass the Integrated Algebra Regents exam in 2015-16. The total figure for students not passing is 85,868. When the old Integrated Algebra exam was administered, the passing rate included all test takers from grades 8 to 12. The number of students not passing increased by 15% when compared with 2014 (the last year that 9th grade students could take the Integrated Algebra Exam). To arrive at the not passing figure of 85,868 students, Common Core Algebra 1 and Integrated Algebra test takers were added together. Here are the results when both tests are included:

2015-16 Not Passing Test Scores for both Common Core Algebra 1 and Integrated Algebra Regents Exams

Algebra Regents 2015-16	Total Test Takers		Level 1	Level 2	Total # of Students Not Passing 2015-16	% Not Passing 2015-16
Common Core Algebra 1	277,410		34,542	44,016	78,558	28.3
Integrated Algebra	17,585		3,836	3,474	7,310	41.5
Total	294,995		38,378	47,490	85,868	29.1%

Source: NYSED Report Card 2015-16. Integrated Algebra does not use Level 1 and Level 2. However, a score of 54 or lower is the same as Level 1 and a score of 64 to 55 is the same as Level 2.

Since the two exams together capture *all* of the students trying to pass the Regents diploma math requirement for 2015-16, adding both groups of test takers is the only way to arrive at an accurate figure.

- NYSED allowed a small group of students to continue to take Integrated Algebra Regents in January and June 2016:** With transition to the Common Core Regents, NYSED issued a ruling in December 2015 allowing a group of students to continue to take the Integrated Algebra Regents Exam to meet the Regents math graduation requirement. As the guidance below shows, this group would be almost all 12th graders. This group of 17,585 students are the ones that are struggling to graduate with a Regents diploma but haven't given up yet. Students entering high school in the fall of 2014 or the fall of 2015 were only allowed to take the Common Core Algebra 1 Exam for the Regents diploma math requirement.

“To assist those students who had already begun or completed instruction in an integrated algebra course aligned to the Mathematics Core Curriculum (Revised 2005) prior to September 2013, two special administrations of the Regents Examination in Integrated Algebra (2005 Learning Standard) will be provided. These special administrations will take place on February 25, 2016 and June 1, 2016. **Consistent with §100.5(g)(1)(ii)(b) of the Commissioner’s regulations, only those students who first began or completed instruction in an integrated algebra course aligned to the Mathematics Core Curriculum (Revised 2005) prior to September 2013 may take the Regents Examination in Integrated Algebra during these special administrations.**” Source: <http://www.p12.nysed.gov/assessment/hsgen/2016/510-216.pdf>

Prior to Common Core, the NYSED Report Card test scores for the Integrated Algebra Regents exam included all student test takers from 8th to 12th grade.

- Analysis of 8th grade math scores can explain the increase:** The increase of 11,340 students failing the Algebra regents can be explained by the big jump in the number of incoming high school students with 8th grade Level 1 Math scores. A Level 1 Math score means the student is not on track on pass the Algebra Regents. As the chart below shows, since the first year of Common Core Grades 3 to 8 Math test was administered in 2013, the number of students entering high school with a Level 1 Math score has grown significantly. With 28,000 to 40,000 more Level 1 students statewide entering high school each year, it was inevitable that there would be a sizeable increase in the number of students failing the Algebra Regents.

Students Scoring Level 1 on the NYS 8th Grade Math Test

8 th Grade Math Scores	2011 (Pre-Common Core) Students/%		2012 (Pre-Common Core) Students/%		2013 Common Core Students/%		2014 Common Core Students/%		2015 Common Core Students/%		2016 Common Core Students/%	
	Students	%	Students	%	Students	%	Students	%	Students	%	Students	%
Level 1	18,291	9%	14,050	7%	61,446	31%	55,028	37%	44,483	40%	42,338	40%

Source: <http://www.p12.nysed.gov/irs/reportcard/>

As first reported in my [November 2015 Discussion Paper](#), the NYS Grade 3 to 8 Math test offers an early warning and detection system to all high schools and district offices. The increase in the number of students not passing should come as no surprise based on the Common Core test results beginning in 2013.

- What happened to the 26,839 students that failed the Integrated Algebra Regents in 2015 and gave up on trying to pass the exam.** 115,589 students took the Integrated Algebra Regents Exam in 2014-15. Of this group, 44,414 students did not get a passing score of 65. Most of these

students entered high school either in 2011 or 2012 and were allowed to continue with the Integrated Algebra Regents (instead of the Common Core Algebra Regents). For the next year, 2015-16, only 17,585 students took the Integrated Algebra Regents. NYSED only allowed students that had entered high school before 2013 to continue to take the Integrated Algebra Exam. What happened to the other 26,839 students that failed the Integrated Algebra Regents in 2014-15? Did they give up on trying to graduate with a Regents Diploma? Is this a new phenomenon or something that has occurred in prior years?

- **Will NYSED move forward on implementing a Project Based Assessment system as an option for students struggling to graduate with a Regents Diploma:** The Integrated Algebra Regents scores offer a window into the number of high school seniors struggling to pass the math requirement for graduation with a Regents Diploma. In 2016, there were 17,585 students across NYS in 12th grade still trying to still pass their Math Regents requirement. One hope for struggling students in the future is the [NYSED Pathways to Graduation](#) initiative that was announced in January of 2016. Included in this Initiative is the use of project based assessments as an alternative to a passing score on a Regents exam. So far, the New York State Legislature has not approved any funds for it. NYSED is asking the Legislature for \$8 million for the 2017-18 budget to implement a project based assessments system. The sooner funding is inserted in the State budget, the sooner more students will be able to graduate with a Regents Diploma. A discussion of the proposed project based assessment system and the Regents Exams can be found in my [June 2016 Discussion Paper](#).
- **New York State graduation rate may start to drop:** After years of small but steady increases, it's quite possible that the graduation rate will start to drop again. Last year 168,365 seniors graduated from public high schools across New York State. There is now an increase of 11,340 students that did not pass either the Common Core Algebra 1 Regents Exam or Integrated Algebra this past year- one of the required exams for a Regents Diploma. There is also another group of 26,839 students that appear to have stopped trying to pass the math exam requirement for the Regents Diploma. Unless schools are able to provide extra help to these students (or NYSED is able to implement a project based assessment system), the increase in the number of students failing the Algebra Regents could impact the graduation rate.