

# Palisades Charter High School

## 2016 Freshman Math Placement Data Report

Submitted to the Board of Trustees 04/11/2017

(Prepared by Libby Butler – Freshman Math Placement Coordinator)

### OVERVIEW:

This report includes data for all freshman who completed a math class in the 2016 fall semester (N=755). Analysis includes breakdowns for placements based on the Placement Criteria approved by the Board of Trustees 3/29/2016. Interpretations of the data and recommendations for future placements are provided.

Counselors are mostly consistently with placing students according to placement criteria results, with 99.3% of students scheduled in the recommended course or lower (some parents request lower). The Math Placement Test was used to place 90.7% of the freshman students prior to the start of the school year. All but 1.9% of students at least had the Checkpoint test to confirm placement, an assessment analyzed only to determine gross misplacements.

- **Recommendation:** Streamline a method for counselors to report changes from the recommended placement, with rationale documented with the freshman math placement database.
- **Recommendation:** Increase the number of students taking the placement test at least once prior to the start of school.

### FRESHMAN MATH COURSE ENROLLMENT FOR THE 2016 FALL SEMESTER:

Algebra A	16.7%
Algebra 1A	31.3%
Algebra 1B	12.2%
Geometry A	17.5%
Honors Geometry A	0.9%
Algebra 2A	12.6%
Honors Algebra 2A	8.2%
Honors Math Analysis	0.2%

### **Interpretation and Recommendations:**

- 16.7% of incoming freshman enrolled in an intervention version of the grade level course is a bit high. The consequence of this is just under 1/5 of the students locked into off-track courses unless summer school is completed, potentially permanently tracking them with low achieving math students throughout high school.
  - **Recommendation:** Identify students who could have succeeded in Algebra 1A based on math teachers' observations and examine placement data to try to adjust placement analysis to decrease the number of students in Algebra A in the future. Possibly include qualitative data such as teacher recommendations from 8<sup>th</sup> grade and/or during the first couple of weeks of school into the placement criteria for these students.
- 12.2% of incoming freshman enrolled in Algebra 1B is also problematic, if these students remain off-track.

- **Recommendation:** Track course taking beyond freshman year, documenting use of summer school to get back to traditional track courses.
  - If the number of students getting back to traditional track by sophomore year is high, then there is not a problem.
  - If the number of students getting back to traditional track by sophomore year is low, then consider placing these students into Algebra 1AB instead of just Algebra 1B.
- The percentage of incoming freshman placing into Honors Geometry, 0.9%, has been low for a couple of years, but takes a handful of students and tracks them in 9<sup>th</sup> grade for a course that is not highly correlated to Algebra 1 knowledge.
  - **Recommendation** to eliminate this placement option. The students can take non-honors Geometry in 9<sup>th</sup> grade and still qualify for Honors Algebra 2 in 10<sup>th</sup> grade, a course highly correlated to Algebra 1 knowledge.

FALL SEMESTER MATH SUCCESS FOR FRESHMAN PLACED ACCORDING TO PLACEMENT CRITERIA:

Course	Earned a "C" or Better
Algebra A	51.5%
Algebra 1A	77.4%
Algebra 1B	90.7%
Geometry A	92.6%
Algebra 2A	98.9%
Honors Geometry	85.7%
Honors Algebra 2	98.4%

**Interpretation and Recommendations:**

- Freshman in courses above Algebra 1A are having very high levels of success, an indication of overall readiness for advanced courses aligned well with the placement criteria.
- The percent of students succeeding in Algebra 1A is moderately high, an indication that readiness for high school Algebra 1 is aligned well with the placement criteria.
- Almost half of students in Algebra A are failing to have success in high school math despite the intervention.
  - **Recommendation:** Examine class structures and assessments to identify ways to better meet students' needs within these classes.
  - **Recommendation:** Survey and/or interview Algebra A students to identify ways to better meet their needs within these classes.
  - **Recommendation:** Reduce the number of students placed into Algebra A who may succeed with the greater challenge of Algebra 1AB.

OVERALL PLACEMENT DATA:

Placement	Percent of Total Placements	Revere	Non-Revere
Algebra ABC	14.9%	12.2%	23.4%
➤ From Math 8		(39.7%)	
Algebra 1A	30.0%	25.7%	36.5%
• From Math 8		(60.3%)	
• Prior Algebra 1 Passed		(10.3%)	
Algebra 1B	13.6%	12.2%	15.6%
• Prior Algebra 1 Passed		(17.7%)	
Tested out of Algebra 1AB	41.4%	49.6%	24.6%
• Geometry A		(51.85% from Algebra 1)	
• Honors Geometry A		(2.1% from Algebra 1)	
• Algebra 2A		(56.3% from Geometry)	
• Honors Algebra 2A		(37.7% from Geometry)	

**Interpretation and Recommendations:**

- *Revere students appear to be placing into higher level courses at significantly higher rates, but incomplete prior course data makes it impossible to use this data to determine whether or not there is implicit bias in the design of the placement criteria. It is possible the differences can be at least partially contributed to non-Revere feeder schools not offering courses higher than Math 8.*
  - **Recommendation:** Consistently gather prior course information upon registration for all students and revisit possible implicit bias with complete data next year.
- *Close to 40% of students from Revere tested into Algebra ABC instead of Algebra 1A from Math 8.*
  - **Recommendation:** Share this information with the math department and administration at Revere.
- *72% of students from Revere who completed at least Algebra 1AB with grades of “C” or better placed into the next course, meaning 28% of Revere students were required to repeat Algebra 1A and or Algebra 1B at Pali. Of students who successfully completed Algebra 1 in 8<sup>th</sup> grade, 46% were required to repeat all or part of Algebra 1, along with 6% of students who successfully completed Algebra 1 and Geometry at Revere.*
  - **Recommendation:** Share this information with the math department and administration at Revere. It appears as though about half of the students placed into Algebra 1 at Revere may benefit more from a placement into Math 8.

PLACEMENTS BY GENDER:

Course	Female	Male
Algebra ABC	12.1%	17.3%
Algebra 1A	33.7%	25.6%
Algebra 1B	12.7%	14.1%
Tested out of Algebra 1AB	40.8%	41.8%
• Honors	(23.1%)	(29.7%)

**Interpretation and Recommendations:**

- *There are no large significant differences for placements between males and females, but higher proportions of males placing into Algebra ABC and into Honors (percents noted for Honors are out of the students who tested out of Algebra 1AB) may be indicative of implicit bias in the placement criteria.*
  - **Recommendation:** Watch this data for a similar trend next year before investigating potential gender bias.

PLACEMENTS BY ETHNICITY:

Course	Asian	Hispanic	Black	White
Algebra ABC	6.1%	28.1%	36%	7.0%
Algebra 1A	7.6%	42.1%	37%	27.1%
Algebra 1B	13.6%	15.7%	13%	12.9%
Tested out of Algebra 1AB	72.7%	14.0%	14%	53.1%
• From Retest	(1.5%)	(0.8%)	(0.0%)	(5.2%)
• Honors	(54.2%)	(0.0%)	(7.1%)	(23.8%)

**Interpretation and Recommendations:**

- There are large significant differences for placements between ethnic groups.
  - **Recommendation:** Identify students in Algebra ABC who could have succeeded in Algebra 1A and students in Algebra 1A or 1B who could have succeeded beyond Algebra 1, based on math teachers' observations, and examine placement data to try to adjust placement analysis to decrease the number of students in Algebra A and repeating Algebra 1AB in the future. Possibly include qualitative data such as teacher recommendations from 8<sup>th</sup> grade and/or during the first couple of weeks of school into the placement criteria for students to place into or out of Algebra 1AB.
  - **Recommendation:** Allow students to enroll in Algebra 1A, against the recommendation from the placement criteria within the first two weeks of school.
  - **Recommendation:** Review the placement criteria with the intent to reduce implicit bias between ethnic groups.
- A large part of the placement criteria depends on course(s) completed in middle school. Looking at the data we have from Revere, there are large differences between the proportions of students who completed different course levels prior to enrolling at Pali. Below is the data for incoming freshman from Revere. The first table provides the proportions of students within each ethnic group enrolled in each 8<sup>th</sup> grade course. The second provides the proportions of each ethnic group eligible for a higher placement based on previous course completion that placed into a lower course because of the math placement test.

Revere Course	Asian	Hispanic	Black	White
Math 8	12.7%	61.2%	53.6%	18.4%
Algebra 1	29.1%	32.7%	39.3%	45.5%
Geometry	58.2%	6.1%	7.1%	36.1%

Revere 8 <sup>th</sup> Grade to 9 <sup>th</sup>	Asian	Hispanic	Black	White
Algebra ABC	42.9%	55%	25%	29.1%
Algebra 1 → Algebra 1A or 1B	25%	68%	65%	40.8%
Geometry → Algebra 1A or 1B	0%	0%	25%	7.4%

- **Recommendation:** Share this data with the Revere Math Department and Administration, encouraging them to consider implicit bias in their placement criteria that is impacting high school math placement.