Palisades Charter High School
2018 Freshman Math Placement Data Report
(Prepared by Libby Butler – Freshman Math Placement Coordinator)

OVERVIEW:

This report includes data for all freshman who completed a math class in the 2018 fall semester (N=711). Analysis includes breakdowns for placements based on the Placement Criteria approved by the Board of Trustees 5/15/2018. Interpretations of the data and recommendations for future placements are provided.

The Math Placement Test was used to place 92.1% of the freshman students prior to the start of the school year, compared to 92.6% in 2017.

FRESHMAN MATH COURSE ENROLLMENT FOR THE 2016 FALL SEMESTER:

COURSE	2018	2017	2016
Algebra 1A1	1.4%	0.9%	NA
Algebra A	2.8%	12.6%	16.7%
Algebra 1A CL	2.3%	1.3%	NA
Algebra 1A	35.1%	33.8%	31.3%
Algebra 1B	5.1%	4.6%	12.2%
Geometry A	22.6%	21.4%	17.5%
Geometry B	0.3%	0.1%	NA
Honors Geometry A	8.2%	3.2%	0.9%
Algebra 2A	9.9%	13.6%	12.6%
Honors Algebra 2A	12.3%	8.3%	8.2%
Math Analysis (Honors included)	0%	0.1%	0.2%

Interpretation and Recommendations:

❖ *The percent of incoming freshman enrolled in an intervention version of the grade level course has reduced from 16.7% in 2016 to less than 5% in 2018. The sharp decline in 2018 is partially due to a protocol that prioritized the use of grades for placement in Algebra 1A. However, this protocol only improved the placement for eight students who would have otherwise been placed into Algebra A based solely on the placement exam results. The majority of Math 8 students taking the exam in 2018 showed higher levels of proficiency with the pre-algebra content on the placement exam than in previous years.*

❖ *The percentage of incoming freshman placed in Honors Geometry rose from 3.2% to 8.2%, while the percentage of students placed in Algebra 2 and Honors Algebra 2 declined. This trend is representative of changes in course enrollment in middle school, with fewer students overall completing more than Algebra 1 before entering high school.*

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

Course	2018 Earned a "C" or Better	2017 Earned a "C" or Better	2016 Earned a "C" or Better
Algebra 1A1	100%	100%	NA
Algebra A	80%	65.3%	51.5%
Algebra 1A CL	93.8%	100%	NA
Algebra 1A	64.3%	81.4%	77.4%
Algebra 1B	97.2%	91.4%	90.7%
Geometry A	90.7%	98.2%	92.6%
Geometry B	100%	100%	NA
Algebra 2A	97.2%	97.2%	98.9%
Honors Geometry	91.4	96%	85.7%
Honors Algebra 2	98.9%	100%	98.4%

In placing students into higher courses based on math course completion and grades from 8th grade, eight students placed into Algebra 1A instead of Algebra A based on grades alone, one student placed into Algebra 1B instead of Algebra 1A based on prior Algebra 1A grade, and 41 students placed into Geometry instead of Algebra 1A or 1B because of middle school math grade(s). Below is a table of these students Fall Semester Math Success:

Course	2018 Earned a "C" or Better
Algebra 1A (N=8)	37.5%
Algebra 1B (N=1)	100%
Geometry (N=41)	95.2%

Interpretation and Recommendations:

❖ *The percentage of students who were unsuccessful in Algebra 1A almost doubled from 18.6% in 2017 to 35.7% in 2018.*

❖ *All but 8 incoming freshman placed into Algebra 1A using only placement test results so changes in the placement protocol designed to increase access cannot account for this large decrease in student success.*

❖ *Despite placing all students who were successful in Math 8 into Algebra 1A, leaving only students who both earned grades of "D" or "F" in Math 8 AND failed to demonstrate sufficient proficiency with the pre-algebra content assessed on the placement exam, the percentage of students who succeeded in Algebra A rose significantly, from 65.3% to 80%.*

   o *Having this class more homogeneous for the extremely at risk students seems to have been beneficial in the short term. It will be important to follow these students to see if this intervention carries through to success throughout the college prep math sequence.*

   o *Only 3 of the 8 students who moved into Algebra 1A instead of Algebra A, based on grades alone, earned a "C" or better in the Fall semester.*

   o ***Recommendation:*** *The department should consider additional intervention support for students who demonstrate significant gaps in their pre-algebra content knowledge with Math 8 grades high enough for placement into Algebra 1A. This does not have to be enrollment in Algebra A, but should include some form of support.*

- *The percentage of students who failed to earn grades of "C" or better in Geometry rose five fold in 2018 compared to 2017. A significantly large number of students were placed into Geometry based on grades from Algebra 1B but the percentage of those students who earned grades of "C" or better (95.2%) was higher than the overall success rate (90.7%) so these students do not account for the significantly lower success rate in 2018.*
- *The success rates in other courses remained about the same or slightly higher.*
- *The combined decreases in success of students in Algebra 1A and Geometry indicate a need for additional systemic support for all students in the early stages of the college preparatory math program.*
    - *Recommendation: The department should consider a critical analysis or instructional and/or grading practices to ensure all students currently in the foundational college preparatory courses have opportunities for success.*

OVERALL PLACEMENT DATA:

This data represents students who took the math placement test prior to the start of the 2018 school year with complete data from middle school course placement and grades. The percentages provided in parentheses represent subsets of students based on last course completed, with those percentages reflecting proportions of students coming from different courses. The purpose for the separation of Revere and Non-Revere is to determine whether or not there may be unintended advantages or disadvantages in the placement criteria that depend on middle school attended.

Placement	Percent of Total Placements	Revere (N=554)	Non-Revere (N=109)
Algebra ABC	3.2%	3.61%	0.9%
Algebra 1A	36.1%	32.49%	54.1%
❖ From Math 8		84.5%	97.1%
❖ From Algebra 1		13.5%	36.7%
❖ From Geometry or Higher		0%	9.1%
Algebra 1B	7.4%	7.4%	7.3%
❖ From Algebra 1		14.35%	12.2%
❖ From Geometry or Higher		0.7%	0%
Tested out of Algebra 1AB	44.8%	47.29%	32.11%
• Geometry A		(47.8% from Algebra 1)	(36.7% from Algebra 1)
• Honors Geometry A		(23.9% from Algebra 1)	(12.24% from Algebra 1)
• Algebra 2A		(34.5% from Geometry)	(45.5% from Geometry)
• Honors Algebra 2A		(61.2% from Geometry)	(36.4% from Geometry)

Interpretation and Recommendations:

- *Most of the students who placed into the Algebra ABC, 3 semester Algebra 1 sequence, came from Revere. Overall, the numbers were low but this data is worthy of sharing with the Revere Math Department.*
- *Non-Revere students had higher proportions entering Algebra 1A from Math 8 and from Algebra 1 or higher compared to Revere students. This is indicative of a less strong alignment between the Math 8 courses for Algebra 1 readiness but a stronger alignment between Revere Algebra 1 courses with content knowledge expectations for placement in Geometry and Algebra 2 compared to Non-Revere courses.*
- *There are significant differences between Revere and Non-Revere students' placement into honors level courses that cannot be ignored, both for Honors Geometry and for Honors Algebra 2.*
    - *Recommendation: Consider including another measure for students to place into Honors Geometry and Honors Algebra 2.*

PLACEMENTS BY GENDER:

Course	Female	Male
Algebra ABC	3.1%	3.2%
Algebra 1A	34.8%	37%
Algebra 1B	6%	8%
Tested out of Algebra 1AB	55.5%	51.48%
❖ Honors	(24.48%)	(22.52%)

Interpretation and Recommendations:
❖ *The gender differences for math placements in 2018 have slightly increase, though still not significantly different. This is an area that the department should watch closely to see if the trend continues to slowly increase the gap.*

PLACEMENTS BY ETHNICITY:

Breakdown of Placements Out of Total in Each Ethnic Group

Course	Asian (N=51)	Hispanic (N=117)	Black (N=61)	White (N=428)
Algebra ABC	0%	6%	8.2%	2.1%
Algebra 1A	13.7%	59.8	55.7%	28.7%
Algebra 1B	3.9%	5.1%	9.8%	8.2%
Tested out of Algebra 1AB	82.4%	29.1%	26.2%	61%
❖ From Retest	(2%)	(3.4%)	(1.6%)	(3.7%)
❖ Honors	(52.9%)	(6.8%)	(8.2%)	(26.9%)

Interpretation and Recommendations:
❖ *The ethnic gaps for math placement remain significantly prevalent. These gaps are mostly attributed to course completion in middle school but the gaps in honors placement reflect differences in math placement test achievement as well. Asian and white students have much higher rates of success that meet the criteria for placement in honors courses.*
  o *Recommendation: The math department should examine alternatives to separating to honors and college preparatory students for Geometry and Algebra 2 in order to decrease the segregation of students into different courses when there is obvious unintentional bias in the placement criteria and students receive no benefit in their Grade Point Average calculations for honors math prior to fourth year courses.*

Placements Based on Previous Course Completion

❖ *Available data for course completion is not entirely complete for all students, noted in the N values for this analysis*

Course	Asian (N=49)	Hispanic (N=113)	Black (N=57)	White (N=416)
Math 8→Algebra ABC	(N=5) 0%	(N=66) 10.6%	(N=37) 13.5%	(N=98) 9.2%
Algebra 1 → Algebra 1A or 1B	(N=17) 17.6%	(N=42) 35.7%	(N=16) 25%	(N=203) 32%
Geometry or Higher → Algebra 1A or 1B	(N=27) 0%	(N=5) 0%	(N=4) 25%	(N=115) 0%
8th grade course completed→Next Class	(N=49) 93.9%	(N=113) 80.5%	(N=57) 82.5%	(N=416) 82.2%

Interpretation and Recommendations:

❖ *The gaps in course placement for intervention, repeating Algebra 1, and advancing to higher levels of advanced math courses when eligible are all decreasing. Current gaps can be attributing mostly to the course completion patterns prior to enrollment, trends that continue to be significantly biased by ethnicity.*