



2015-2016 Student Benchmark Assessment Data: Preliminary Results

Introduction

During the school year, students take interim assessments (or benchmarks) as part of the Smarter Balanced Assessment system which allows teachers to gauge student progress towards meeting state common core standards by testing students' mastery of specific concepts. This allows teachers to identify areas of weakness which can benefit from review prior to the summative end-of-year assessment and also helps teachers to refine instruction for subsequent years.

The following report examines students' performance on the first two of these assessments and the proportions of students whose scores remained at a performance level that meets the common-core standard or improved at least one level. It is important to note that these initial two benchmark assessments test mastery of different concepts, while the end-of-year assessment, which has not yet been administered, will be summative. As such, these results are an imperfect measure of progress or improvement towards mastery of important concepts aligned to Common Core State Standards.

The assessment tests define four levels: standard exceeded, standard met, standard nearly met, and standard not met. For simplicity, the proportions of students meeting and exceeding the standard are combined for this report.

Two measures of progress are reported. The first, "*improvement*" refers to the proportion of students who improved at least one performance level between assessments as well as those who met or exceeded the standard for both assessments. For example, a student who scored at the level of "not met" for trimester 1 and "nearly met" for trimester 2 was counted as having improved. A student whose performance remained at a level which meets the standard was also counted as having improved. The second measure, "*newly meeting standard*" reports the % of students who met or exceeded the standard at the second trimester/semester among those students who had not met/exceeded the standard at the first trimester/semester assessment.

In addition, this report examines at district-level whether student performance differed between students by student ethnicity, English language fluency, low-income status, foster youth status, homelessness, or participation in GATE and Dual Language Immersion programs.



Primary: Grades K-5

Figure 1 includes students' ELA performance levels towards meeting the common-core standard at trimesters 1 and 2.

The largest proportions of Kindergarten (about 81%) and first grade (72-77%) students scored at a level meeting the standards than higher grade levels. At trimester 2, a large majority of fifth graders (76%) did not meet the standard. This is the only grade in which more students did not meet the standard at the 2nd trimester assessment than at the 1st trimester assessment.

Figure 1. ELA trimester 1 and trimester 2 performance by grade level.

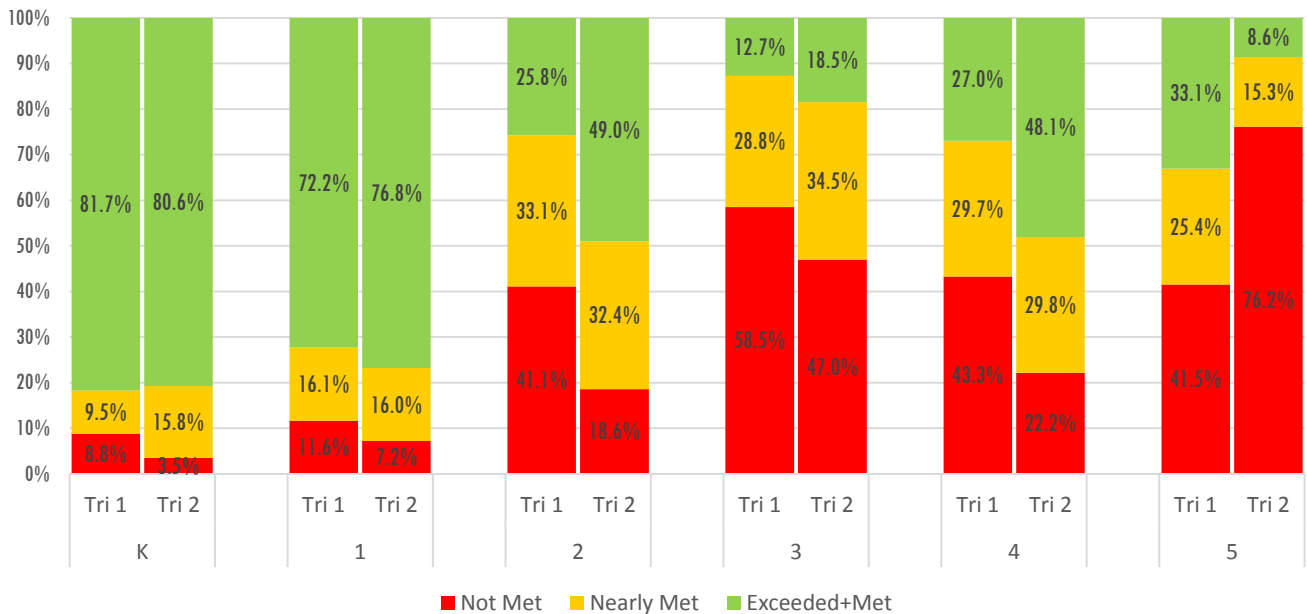


Figure 2 summarizes proportions of students improving their performance or maintaining proficiency, as well as the proportions of students who met the standard at the 2nd assessment among those who did not meet the standard at the first assessment.

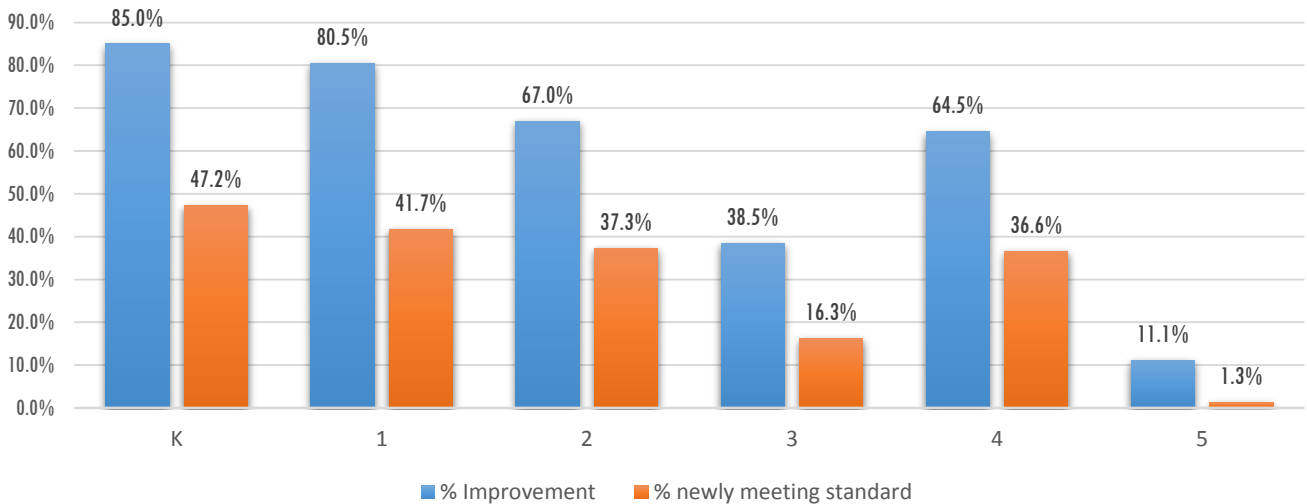
Among Kindergarten and first grade students, about 8 in 10 students continued to meet the standard at trimester 2 or improved their score by at least one level. While roughly two-thirds of students in the 2nd and 4th grades remained proficient or improved a level or more, a smaller proportion (39%) of 3rd graders did so. A similar pattern is observed when examining the number of students not meeting the standard at assessment 1 who later met the standard at assessment 2. Students in the 5th grade showed the least improvement, with roughly 1 in 10 students who met the standard at assessment 1 continuing to do so or improving their performance at least one level. Nearly all (99%) fifth grade students who did not meet the standard at the first trimester assessment also did not meet the standard at the 2nd trimester assessment.



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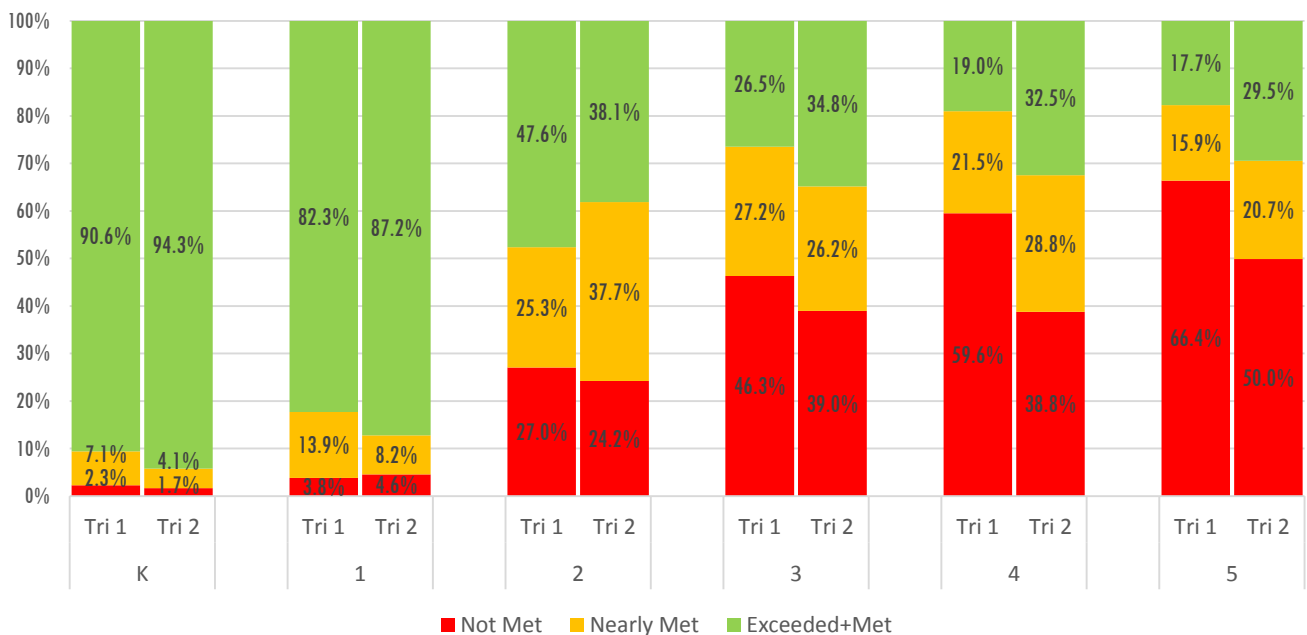
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Figure 2. ELA improvement between trimesters 1 and 2.



Between 82% and 94% of students in Kindergarten and 1st grade performed at a level that met or exceeded the standard in math on the trimester 1 and 2 interim assessments. Smaller proportions of students met the standard among 3rd, 4th, and 5th graders. However the proportion of students meeting the standard did increase between assessments.

Figure 3. Math trimester 1 and trimester 2 performance by grade level.



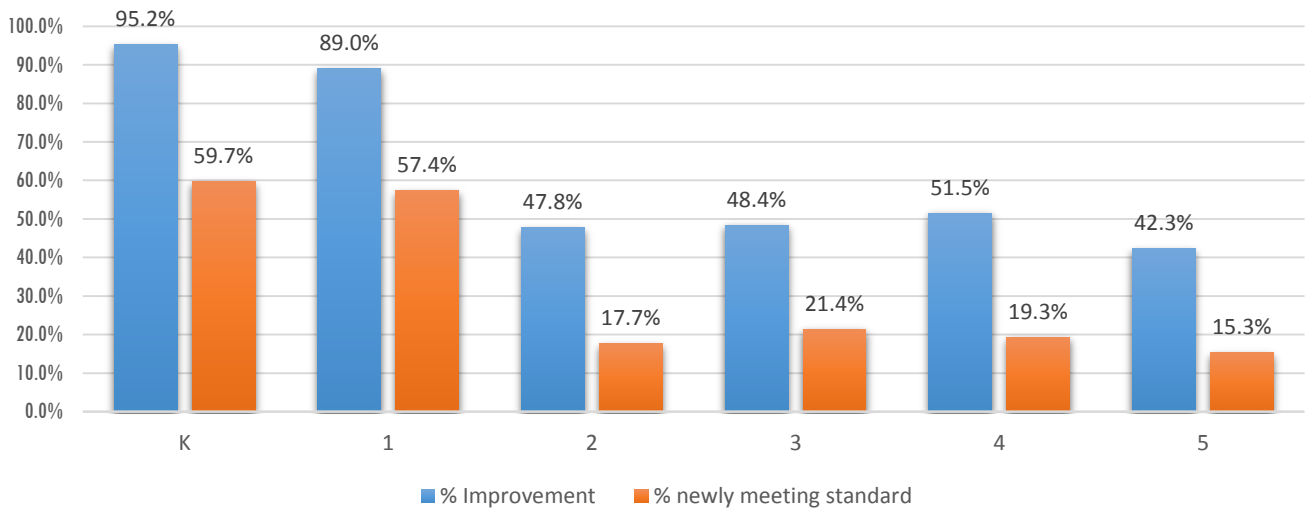


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Figure 4 which reports improvement on the math interim assessments, shows again that Kindergarten and 1st graders tended to continue to meet the standard. About half of students in grades 2 through 4 and 42% of students in grade 5, either continued to meet the standard at the 2nd trimester assessment or improved by at least one performance level. Also, among those students between grades 2 through 5 who did not meet the standard at the 1st trimester, about 2 in 10 reached a level that meets the standard at the 2nd trimester.

Figure 4. Math improvement between trimesters 1 and 2.





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Secondary ELA: Grades 6-11

As shown in Figure 5, among secondary students grades 7 through 11 large majorities of students, between 7 and 8 in 10, did not perform at a level that meets the ELA standards. However, the proportions of students meeting or exceeding the standard did increase modestly (except for 8th grade) at the spring assessment.

Figure 6 also reflects these modest gains for the spring assessment, particularly for 10th and 11th grades.

Figure 5. ELA fall and spring performance by tested grade level.

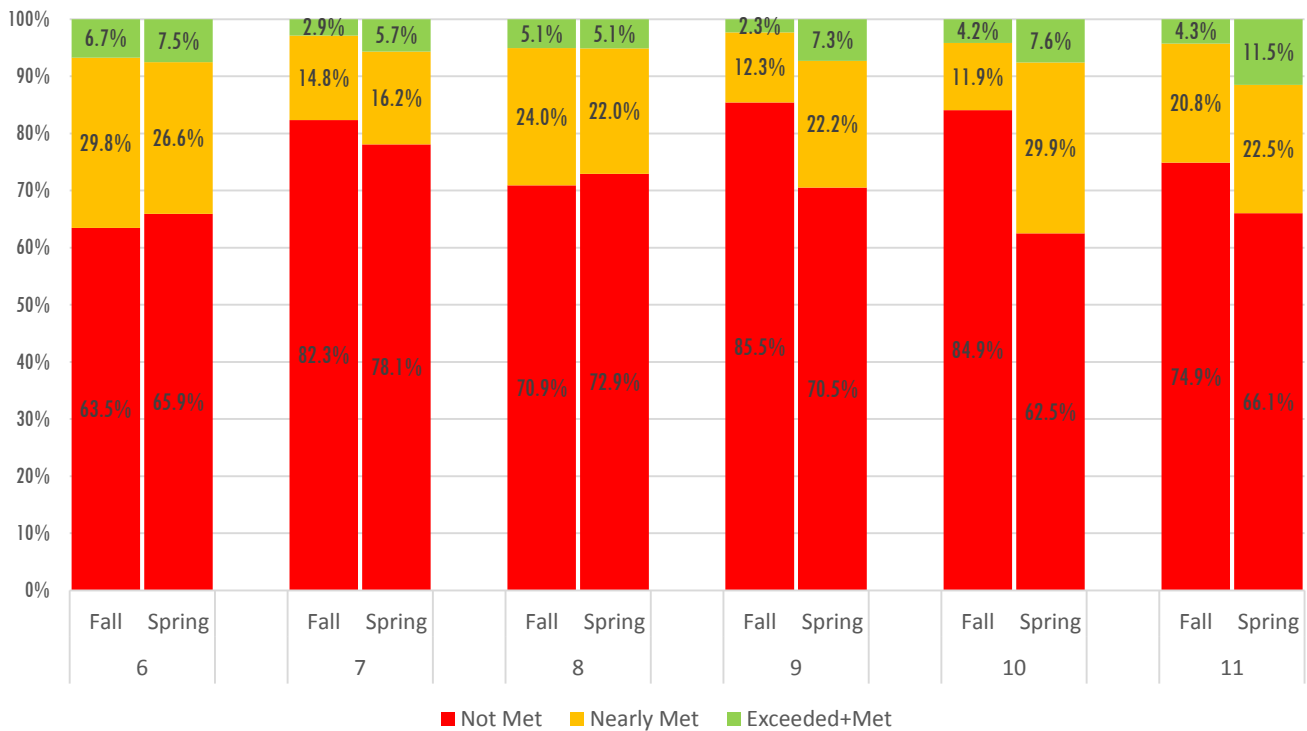
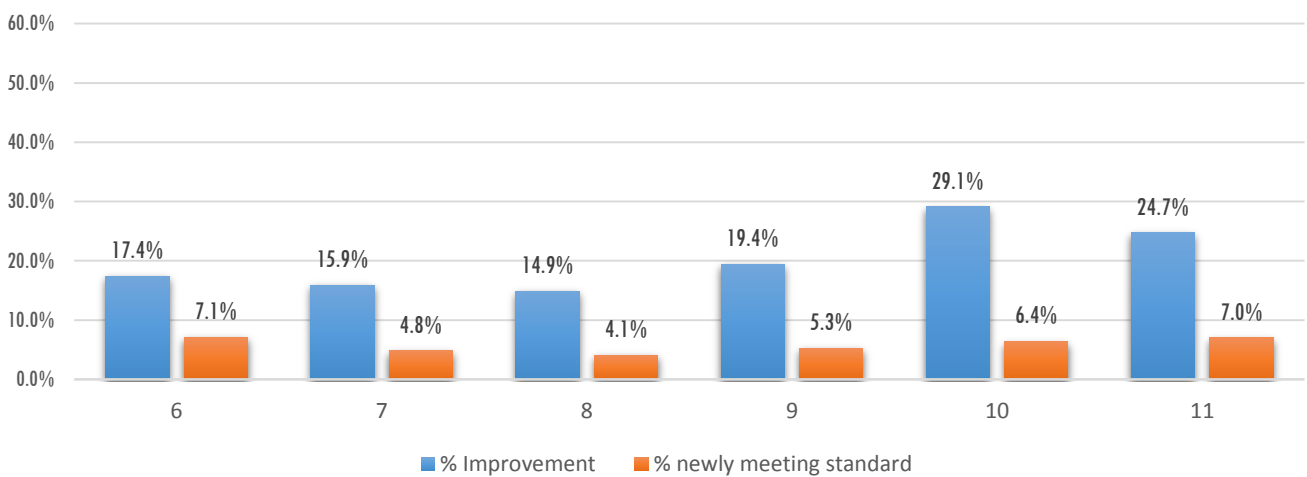


Figure 6. ELA improvement between trimesters 1 and 2.





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Secondary Math: Grades 6-8

Performance data on the math interim-assessments for middle school are presented in figures 7-8.

Larger proportions of students enrolled in honors courses met the standard than students enrolled in regular non-honors courses. Few students in regular courses, between 2-9% performed at a level which meets the standard. The pattern of improvement across interim-assessments (see figure 8) reflects a similar pattern, with more honors students maintaining proficiency or improving at least one level between fall and spring.

Figure 7. Math fall and spring performance by math course.

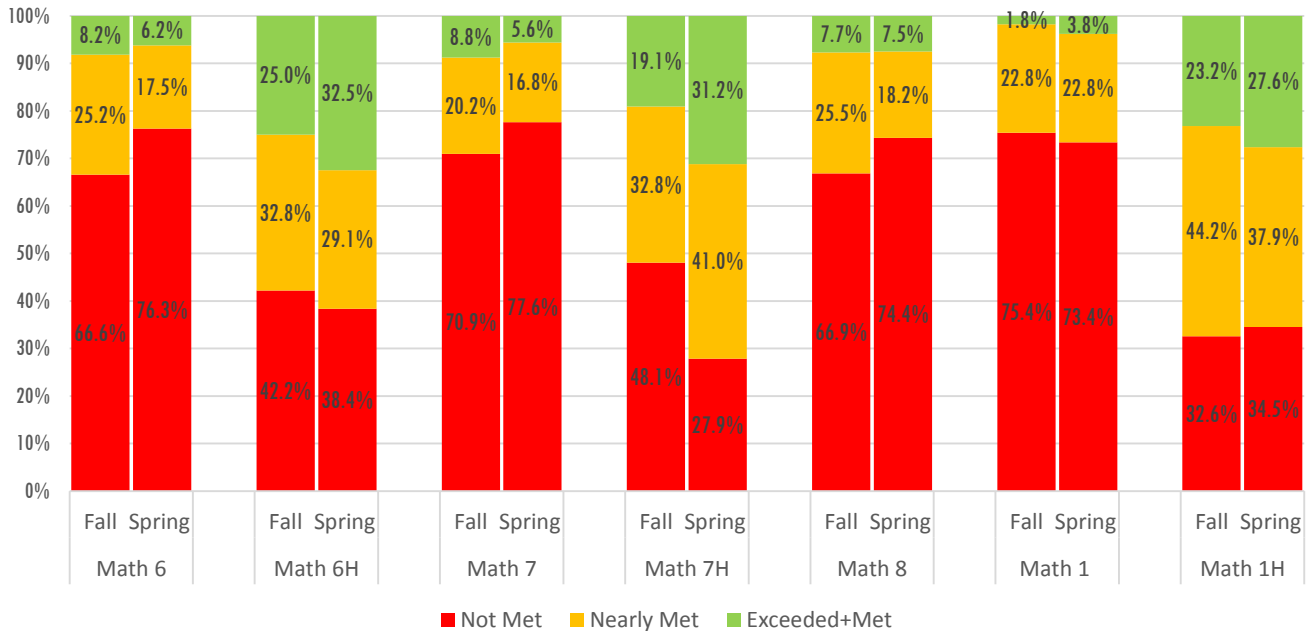
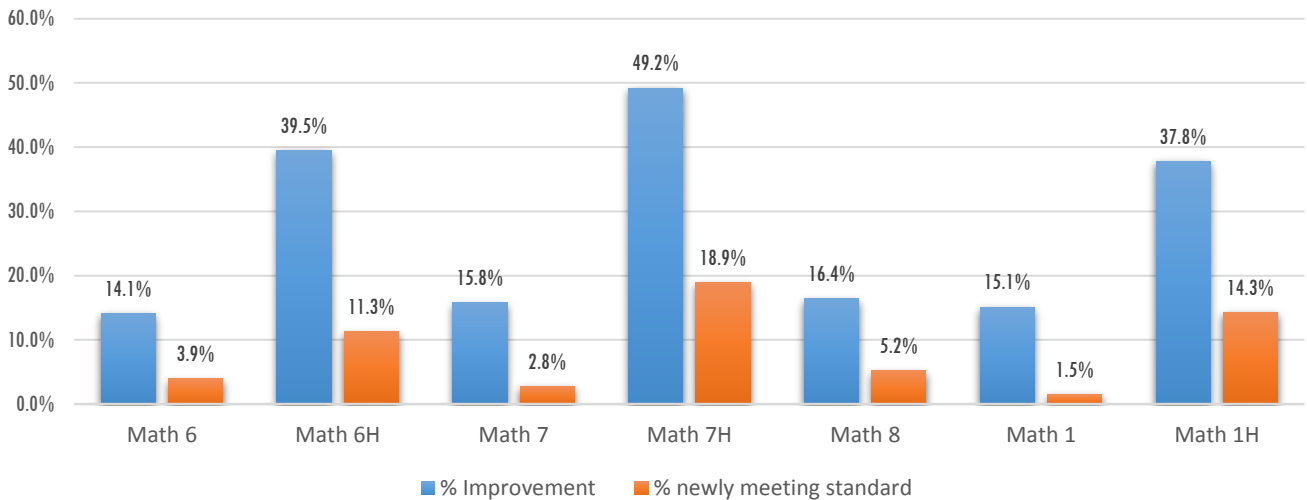


Figure 8. Math improvement between fall and spring semesters.





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Secondary Math: Grades 9-12

Performance data on the math interim-assessments for high school students are presented in figures 9-10.

Fewer than 1% of students enrolled in Math 1 or Math 2 performed at a level meeting the state standard in the fall or spring. Performance in honors Math 1 and Math 2 was slightly better, but still quite low overall, with fewer than 5% of students meeting the standard. However, more students in the honors courses (see figure 10) showed improvement in their scores. Larger proportions of Algebra II students performed at a level meeting the standard in fall (14%) and spring (19%).

Figure 9. Math fall and spring performance by math course.

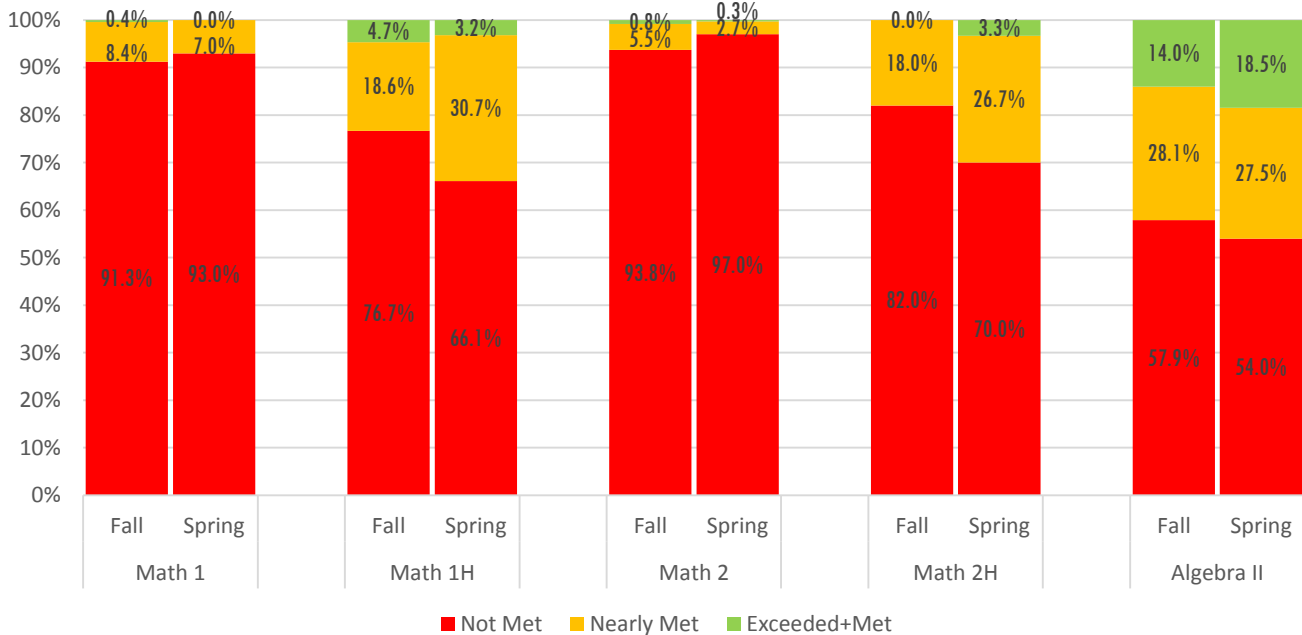
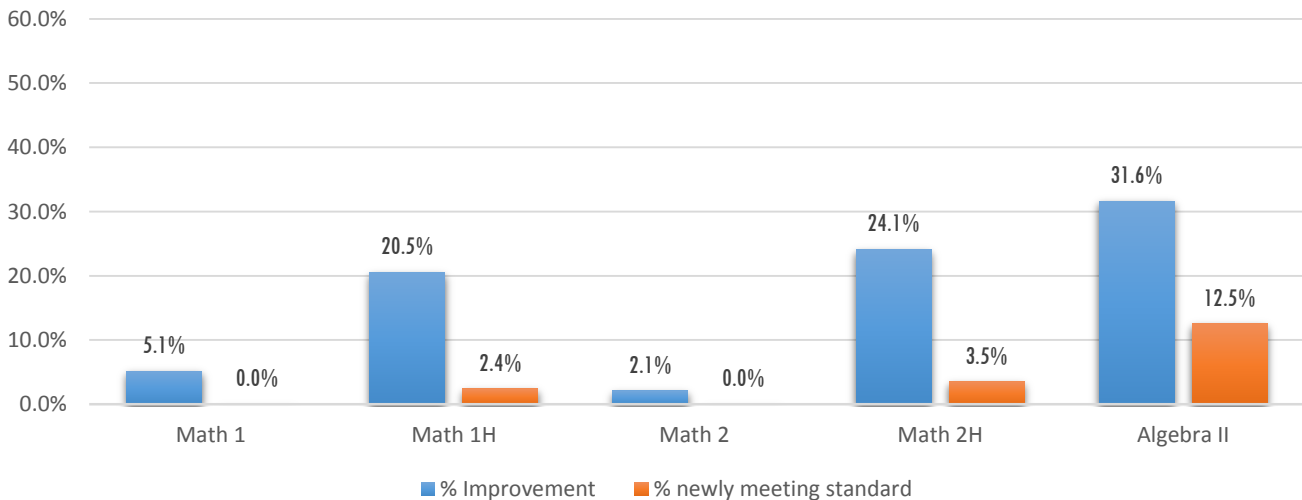


Figure 10. Math improvement between fall and spring semesters.





Differences in performance between student groups

Chi-square statistical analyses were employed to determine whether the proportion of students meeting the standard differed between students by student ethnicity, English language fluency, low-income status, foster youth status, homelessness, or participation in GATE and Dual Language Immersion programs to a statistically significant degree (a degree which is unlikely to occur due to chance variation).

Performance is examined for ELA and Math, but collapsed across grade levels and math courses. A future report examining Smarter Balanced Assessment performance which includes the summative end-of-year performance will examine student performance at a more granular level.

Ethnicity

To examine differences between students of different ethnic backgrounds, only the 4 largest ethnic groups were included in the analysis. This was done to maximize statistical power, or in other words, the sensitivity of the test for detecting existing differences between groups.

Tables 1 and 2 describe the proportions of students who met or exceeded the ELA standard and math standard on the two trimester or semester assessments, described as tests 1 and 2, by ethnicity.

Overall, about 27% and 30% of students met the ELA standard for tests 1 and 2 respectively.

Performance differed significantly between student ethnic groups on the ELA benchmark assessments. Fewer African American and Hispanic students met the standard, 21% and 22% respectively at test 1 and also at test 2, 24% and 26%, compared to White and Asian students. About 30% more Asian students and about 20% more White students met the standards at each test compared to Black and Hispanic students.

Table 1. Proportions of students meeting the ELA standard by student ethnicity.

Ethnicity n=test 1/test 2	Test 1		Test 2	
	Not Met	Met	Not Met	Met
Asian (n=634/613)	48.1%	51.9%	47.0%	53.0%
Black/African-American (n=1,503/1,454)	79.1%	20.9%	76.1%	23.9%
Hispanic (n=7,544/7,240)	78.3%	21.7%	74.2%	25.8%
White (n=2,123/1,958)	58.6%	41.4%	57.7%	42.3%
Total (n=11,804/11,265)	73.3%	26.7%	70.1%	29.9%

Test 1: $\chi^2_{(3)}=563.464$; $p<.001$ Test 2: $\chi^2_{(3)}= 382.797$; $p<.001$

Overall about 33% and 39% of students met the math standard for tests 1 and 2 respectively and students of different ethnic groups met the math standard at significantly different rates.



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Smaller proportions of African American and Hispanic students met the standard, 25% and 28% respectively at test 1 and also at test 2, 31% and 33%, compared to White and Asian students. About half of White students met the standard at each interim assessment. And roughly two-thirds of Asian students, the highest performing group, met the standard.

Table 2. Proportions of students meeting the math standard by student ethnicity.

Ethnicity n=test 1/test 2	Test 1		Test 2	
	Not Met	Met	Not Met	Met
Asian (n=618/609)	35.8%	64.2%	30.7%	69.3%
Black/African-American (n=1,475/1,262)	75.1%	24.9%	68.9%	31.1%
Hispanic (n=7,340/6,640)	72.4%	27.6%	66.7%	33.3%
White (n=2,036/1,943)	50.2%	49.8%	47.1%	52.9%
Total (n=11,469/10,454)	66.8%	33.2%	61.2%	38.8%

Test 1: $\chi^2_{(3)}=670.555$; $p<.001$ Test 2: $\chi^2_{(3)}= 515.800$; $p<.001$

English Language Fluency

Tables 3 and 4 include the proportions of students who met or exceeded the ELA standard and math standard by English Language Fluency.

Larger proportions of English only and Initial English Proficient (I-FEP) students (34-36%) and smaller proportions of Reclassified English Proficient (R-FEP) and English Learner students (9-30%) performed at a level meeting the ELA standard than statistically likely to have occurred by chance variability. This pattern also occurs with the math standard (see table 4).

Counter-intuitively, RFEP students appear to perform worse than English learners; however this is an artifact due to a much larger proportion of English Learner students being enrolled in primary grades (K-5) which generally performed better on the assessments than middle and high school students.



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Table 3. Proportions of students meeting the ELA standard by language fluency.

Language fluency n=test 1/test 2	Test 1		Test 2	
	Not Met	Met	Not Met	Met
English Only (n=6,641/6,336)	66.2%	33.8%	63.8%	36.2%
Initial English Proficient (n=1,073/1,005)	65.0%	35.0%	64.3%	35.7%
English Learner (n=2,499/2,395)	76.0%	24.0%	69.9%	30.1%
Reclassified English Proficient (n=2,232/2,155)	91.5%	8.5%	88.2%	11.8%
Total (n=12,445/11,891)	72.6%	27.4%	69.5%	30.5%

Test 1: $\chi^2_{(3)}=582.079$; $p<.001$ Test 2: $\chi^2_{(3)}= 464.842$; $p<.001$

As with the ELA benchmark assessments, larger proportions of English only and Initial English Proficient (I-FEP) students (41-48%) and smaller proportions of Reclassified English Proficient (R-FEP) and English Learner students (11-37%) performed at a level meeting the math standard than statistically likely to have occurred by chance variability.

Table 4. Proportions of students meeting the math standard by language fluency.

Language fluency n=test 1/test 2	Test 1		Test 2	
	Not Met	Met	Not Met	Met
English Only (n=6,494/6,336)	58.6%	41.4%	54.0%	46.0%
Initial English Proficient (n=999/1,005)	59.2%	40.8%	52.3%	47.7%
English Learner (n=2,561/2,395)	68.7%	31.3%	63.1%	36.9%
Reclassified English Proficient (n=2,020/2,155)	89.3%	10.7%	83.9%	16.1%
Total (n=12,074/10,017)	66.0%	34.0%	60.5%	39.5%

Test 1: $\chi^2_{(3)}=582.079$; $p<.001$ Test 2: $\chi^2_{(3)}= 532.695$; $p<.001$



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Low-Income Status (economic disadvantage)

Student performance on the two benchmark assessments are displayed in tables 5-6 below disaggregated by economic disadvantage or low-income status. Low-income students are defined as those whose families qualified for free or reduced lunch.

Among students who were not considered low-income, 4 in 10 performed at level meeting the ELA standard, while a significantly lower proportion of low-income students, 21% at test 1 and 25% at test 2, did so.

Table 5. Proportions of students meeting the ELA standard by income status.

Income status n=test 1/test 2	Test 1		Test 2	
	Not Met	Met	Not Met	Met
Non-Low-Income (n=4,240/4,033)	59.8%	40.2%	59.3%	40.7%
Low-Income (n=8,205/7,863)	79.2%	20.8%	74.8%	25.2%
Total (n=12,445/11,896)	72.6%	27.4%	69.5%	30.5%

Test 1: $\chi^2_{(1)}=531.836$; $p<.001$ Test 2: $\chi^2_{(1)}= 302.456$; $p<.001$

As with the ELA standard, a larger proportion of students who were not low-income tested at a level which meets the math standard (about half) at both tests, whereas 26% and 32% of low-income students did at test 1 and 2 respectively.

Table 6. Proportions of students meeting the math standard by income status.

Income status n=test 1/test 2	Test 1		Test 2	
	Not Met	Met	Not Met	Met
Non-Low-Income (n=4,043/3,860)	50.5%	49.5%	46.6%	53.4%
Low-Income (n=8,031/7,159)	73.7%	26.3%	68.0%	32.0%
Total (n=12,074/11,019)	66.0%	34.0%	60.5%	39.5%

Test 1: $\chi^2_{(1)}=643.611$; $p<.001$ Test 2: $\chi^2_{(1)}= 482.045$; $p<.001$



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Department for Planning, Innovation, Accountability, and Support Programs

Special Education Status

Student performance data on the ELA and math benchmark assessments are presented in tables 7 and 8 disaggregated by student special education status. Those students enrolled in special education day classes as well as those with Individualized Education Plans (IEPs) are defined as special education students.

Among non-special education students, about 3 in 10 scored at a level which meets the ELA benchmarks at tests 1 and 2, whereas statistically significantly fewer special education students than can be expected by chance variability did so at test 1 (17%) or test 2 (21%).

Table 7. Proportions of students meeting the ELA standard by special education status.

Special Ed status n=test 1/test 2	Test 1		Test 2	
	Not Met	Met	Not Met	Met
Non-Special Education (n=11,217/10,776)	71.4%	28.6%	68.5%	31.5%
Special Education (n=1,228/1,121)	83.4%	16.6%	79.4%	20.6%
Total (n=12,445/11,897)	72.6%	27.4%	69.5%	30.5%

Test 1: $\chi^2_{(1)}=79.816$; $p<.001$ Test 2: $\chi^2_{(1)}= 57.007$; $p<.001$

Among students who are not special education, larger proportions scored at a level which meets the math benchmarks at test 1 (35%) and test 2 (41%) than among special education students (21% and 28%, respectively).

Table 8. Proportions of students meeting the math standard by special education status.

Special Ed Status n=test 1/test 2	Test 1		Test 2	
	Not Met	Met	Not Met	Met
Non-Special Education (n=10,913/10,029)	64.6%	35.4%	59.4%	40.6%
Special Education (n=1,161/990)	79.1%	20.9%	71.8%	28.2%
Total (n=12,074/11,019)	66.0%	34.0%	60.5%	39.5%

Test 1: $\chi^2_{(1)}=79.816$; $p<.001$ Test 2: $\chi^2_{(1)}= 57.007$; $p<.001$



Pasadena Unified School District

Department for Planning, Innovation, Accountability, and Support Programs

Foster Youth Status

Student performance data on the ELA and math benchmark assessments are presented in tables 8 and 9 disaggregated by foster youth status.

Among students who are not foster youth, about 3 in 10, at both test 1 and test 2 of the ELA benchmarks scored at a level which meets the state standard. By contrast, a smaller proportion of foster youth scored at a level which meets the ELA standard at test 1 (15%) and test 2 (23%).

Table 9. Proportions of students meeting the ELA standard by foster youth status.

Foster youth status n=test 1/test 2	Test 1		Test 2	
	Not Met	Met	Not Met	Met
Non-Foster Youth (n=12,235/10,521)	72.4%	27.6%	69.4%	30.6%
Foster youth (n=210/159)	84.8%	15.2%	77.4%	22.6%
Total (n=12,445/10,680)	72.6%	27.4%	69.5%	30.5%

Test 1: $\chi^2_{(1)}=15.902$; $p<.001$ Test 2: $\chi^2_{(1)}=5.872$; $p=.015$

On the math benchmark assessments, 34% and 40% of non-foster youth scored at a level meeting the standard at test 1 and test 2 respectively. The proportions of foster youth who did so at test 1 and 2 (19% and 23% respectively) were statistically significantly smaller than expected by chance.

Table 10. Proportions of students meeting the math standard by foster youth status.

Foster youth status n=test 1/test 2	Test 1		Test 2	
	Not Met	Met	Not Met	Met
Non-Foster Youth (n=11,866/10,830)	65.7%	34.3%	60.2%	39.8%
Foster youth (n=208/189)	80.8%	19.2%	78.7%	23.3%
Total (n=12,074/11,019)	66.0%	34.0%	60.5%	39.5%

Test 1: $\chi^2_{(1)}=20.694$; $p<.001$ Test 2: $\chi^2_{(1)}=21.158$; $p<.001$



Homeless Status

Tables 11 and 12 contain student performance data for the ELA and Math benchmark assessments disaggregated by homelessness.

While about 30% of students who are not homeless scored at a level meeting the ELA standard, significantly fewer, 11-13% of homeless students did. This difference is statistically significant, meaning that it is unlikely to be a result of chance variability.

Table 11. *Proportions of students meeting the ELA standard by homeless status*

Homeless status n=test 1/test 2	Test 1		Test 2	
	Not Met	Met	Not Met	Met
Non-homeless (n=11,927/11,402)	71.9%	28.1%	68.8%	31.2%
Homeless (n=518/495)	89.2%	10.8%	86.9%	13.1%
Total (n=12,445/11,897)	72.6%	27.4%	69.5%	30.5%

Test 1: $X^2_{(1)}=74.838$; $p<.001$ Test 2: $X^2_{(1)}=73.409$; $p<.001$

On the math benchmark assessments, 35% of students who are not homeless scored at a level meeting the standard at test 1 and 41% of did so at test 2. Significantly smaller proportions of homeless students scored at a level meeting the standard: 13% at test 1 and 15% at test 2.

Table 12. *Proportions of students meeting the math standard by homeless status*

Homeless status n=test 1/test 2	Test 1		Test 2	
	Not Met	Met	Not Met	Met
Non-homeless (n=11,572/10,584)	65.0%	35.0%	59.5%	40.5%
Homeless (n=502/435)	87.5%	12.5%	84.6%	15.4%
Total (n=12,074/11,019)	66.0%	34.0%	60.5%	39.5%

Test 1: $X^2_{(1)}=107.806$; $p<.001$ Test 2: $X^2_{(1)}=110.010$; $p<.001$



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Dual-Language Immersion Program (DLIP) Participation

Student performance data on the ELA and math benchmark assessments are presented in tables 13 and 14 disaggregated by student participation in the Dual-Language Immersion Program (DLIP). Because the first cohort of DLIP students are now in grade 7, this analysis was limited to students enrolled in K through grade 7.

A significantly greater proportion of DLIP students performed at a level meeting the ELA standard than non-DLIP students. While about 34% of non-DLIP students scored at or above the standard at test 1, 58% of Mandarin DLIP and 38% of Spanish DLIP students did. At test 2, 36% of non-DLIP students scored at or above standard compared to about 65% of Mandarin DLIP and about half of Spanish DLIP students.

Table 13. Proportions of students meeting the ELA standard by DLIP participation.

DLIP participation n=test 1/test 2	Test 1		Test 2	
	Not Met	Met	Not Met	Met
Non-DLIP (n=8,584/7,147)	66.3%	33.7%	63.8%	36.2%
Mandarin DLIP (n=409/382)	42.1%	57.9%	35.3%	64.7%
Spanish DLIP (n=423/389)	61.9%	38.1%	48.6%	51.4%
Total (n=9,146/8,964)	65.1%	34.9%	61.9%	38.1%

Test 1: $X^2_{(2)}=103.062$; $p<.001$ Test 2: $X^2_{(2)}=293.984$; $p<.001$

DLIP students also performed better than their non-DLIP counterparts on the math benchmarks. About 4 in 10 non-DLIP students scored at a level meeting the standard at test 1 compared to about 7 in 10 Mandarin DLIP students and 5 in 10 Spanish DLIP students. Similarly, at test 2, 44% of non-DLIP students scored at or above the standard compared to 70% of Mandarin DLIP and 64% of Spanish DLIP students.

Table 14. Proportions of students meeting the math standard by DLIP participation.

DLIP participation n=test 1/test 2	Test 1		Test 2	
	Not Met	Met	Not Met	Met
Non-DLIP (n=8,638/8,125)	60.9%	39.1%	55.9%	44.1%
Mandarin DLIP (n=404/405)	27.5%	72.5%	29.6%	70.4%
Spanish DLIP (n=516/512)	45.7%	54.3%	36.1%	63.9%
Total (n=9,558/9,042)	58.7%	41.3%	53.6%	46.4%

Test 1: $X^2_{(2)}=215.531$; $p<.001$ Test 2: $X^2_{(2)}=172.925$; $p<.001$

It is important to note that parents and students self-select into the DLIP programs and differences in performance between DLIP programs may be the result of other characteristics among DLIP students which are also related to academic performance and not necessarily a result of program effectiveness.



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Gifted and Talented Education (GATE) Participation

Student performance data on the ELA and math benchmark assessments are presented in tables 15 and 16 below disaggregated by student participation in the Gifted and Talented Education (GATE). Because students are identified as eligible for participation in GATE beginning in the third grade, students enrolled in K through grade 2 were excluded from this analysis.

At test 1, GATE students met the ELA standard at a significantly higher rate of about 32% while non-GATE students met the standard at rate of about 9%. At test 2, the difference between the proportions of GATE students (29%) and non-GATE (11%) meeting the standard was also statistically different.

Table 15. Proportions of students meeting the ELA standard by GATE participation.

GATE participation n=test 1/test 2	Test 1		Test 2	
	Not Met	Met	Not Met	Met
Non-GATE (n=7,029/6,830)	91.3%	8.7%	88.9%	11.1%
GATE (n=1,566/1,530)	67.8%	32.2%	71.5%	28.5%
Total (n=8,595/8,360)	87.0%	13.0%	85.7%	14.3%

Test 1: $\chi^2_{(1)}=625.216$; $p<.001$ Test 2: $\chi^2_{(1)}=309.814$; $p<.001$

On the math benchmark assessments GATE students met the standard at a significantly higher rate at both tests 1 and 2. At time 1, 9% of non-GATE students met the standard compared to 44% of GATE students. At time 2, 15% of non-GATE students met the standard compared to about 53% of GATE students.

Table 16. Proportions of students meeting the math standard by GATE participation.

GATE participation n=test 1/test 2	Test 1		Test 2	
	Not Met	Met	Not Met	Met
Non-GATE (n=6,763/5,890)	91.0%	9.0%	85.1%	14.9%
GATE (n=1,357/1,249)	55.6%	44.4%	47.4%	52.6%
Total (n=8,120/7,139)	85.1%	14.9%	78.5%	21.5%

Test 1: $\chi^2_{(1)}=1118.565$; $p<.001$ Test 2: $\chi^2_{(1)}=868.727$; $p<.001$

Because of the eligibility criteria for the GATE program students participating in GATE differ from their non-GATE peers prior to entry into the program, therefore these differences cannot be attributed to the program exclusively.