# How is the district summary affected?

Removing the Tomas High School ‘s ninth graders’ math and reading scores from original data does not change the total number of schools, total budget, and total number of students (considering that Maria and her supervisor want to keep these students in the analysis).

The average math and reading scores dropped by approximately 0.1 and 0.0 scores, respectively. The percent students passing math, reading and both courses are all decreased by approximately one percent. It’s noteworthy to mention that the moderately higher changes to the percent passing parameters compared to the average score parameters is due to the constant denominator (total number of students in the analysis) in percentage parameter calculations.

Table 1. Original District Summary

| **Total Schools** | **Total Students** | **Total Budget** | **Average Math Score** | **Average Reading Score** | **% Passing Math** | **% Passing Reading** | **% Overall Passing** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 15 | 39,170 | $24,649,428.00 | 79.0 | 81.9 | 75 | 86 | 65 |

Table 2. Revised District Summary

| **Total Schools** | **Total Students** | **Total Budget** | **Average Math Score** | **Average Reading Score** | **% Passing Math** | **% Passing Reading** | **% Overall Passing** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 15 | 39,170 | $24,649,428.00 | 78.9 | 81.9 | 74 | 85 | 64 |

# How is the school summary affected?

Removing the Tomas High School ‘s ninth graders’ math and reading scores from original data does not change the school type, number of total students, total school budget, and per student budget (considering that Maria and her supervisor want to keep these students in the analysis).

The average math and reading scores dropped by approximately 0.0 and 0.1 scores, respectively. The percent students passing math, reading and both courses are all decreased by approximately 26, 27, and 26 percent. It’s noteworthy to mention that the higher changes to the percent passing parameters compared to the average score parameters is due to the constant denominator (total number of students in the analysis) in percentage parameter calculations.

In other words, removing ninth graders scores from Thomas High School does not change the average per school scores, but it affects the percent passing math, reading, and overall percent passing.

Table 3. Original School Summary

| **School Name** | **School Type** | **Total Students** | **Total School Budget** | **Per Student Budget** | **Average Math Score** | **Average Reading Score** | **% Passing Math** | **% Passing Reading** | **% Overall Passing** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cabrera High School | Charter | 1,858 | $1,081,356.00 | $582.00 | 83.1 | 84.0 | 94 | 97 | 91 |
| Thomas High School | Charter | 1,635 | $1,043,130.00 | $638.00 | 83.4 | 83.8 | 93 | 97 | 91 |
| Griffin High School | Charter | 1,468 | $917,500.00 | $625.00 | 83.4 | 83.8 | 93 | 97 | 91 |
| Wilson High School | Charter | 2,283 | $1,319,574.00 | $578.00 | 83.3 | 84.0 | 94 | 97 | 91 |
| Pena High School | Charter | 962 | $585,858.00 | $609.00 | 83.8 | 84.0 | 95 | 96 | 91 |
| Wright High School | Charter | 1,800 | $1,049,400.00 | $583.00 | 83.7 | 84.0 | 93 | 97 | 90 |
| Shelton High School | Charter | 1,761 | $1,056,600.00 | $600.00 | 83.4 | 83.7 | 94 | 96 | 90 |
| Holden High School | Charter | 427 | $248,087.00 | $581.00 | 83.8 | 83.8 | 93 | 96 | 89 |
| Bailey High School | District | 4,976 | $3,124,928.00 | $628.00 | 77.0 | 81.0 | 67 | 82 | 55 |
| Ford High School | District | 2,739 | $1,763,916.00 | $644.00 | 77.1 | 80.7 | 68 | 79 | 54 |
| Johnson High School | District | 4,761 | $3,094,650.00 | $650.00 | 77.1 | 81.0 | 66 | 81 | 54 |
| Hernandez High School | District | 4,635 | $3,022,020.00 | $652.00 | 77.3 | 80.9 | 67 | 81 | 54 |
| Huang High School | District | 2,917 | $1,910,635.00 | $655.00 | 76.6 | 81.2 | 66 | 81 | 54 |
| Figueroa High School | District | 2,949 | $1,884,411.00 | $639.00 | 76.7 | 81.2 | 66 | 81 | 53 |
| Rodriguez High School | District | 3,999 | $2,547,363.00 | $637.00 | 76.8 | 80.7 | 66 | 80 | 53 |

Table 4. Revised School Summary

| **School Name** | **School Type** | **Total Students** | **Total School Budget** | **Per Student Budget** | **Average Math Score** | **Average Reading Score** | **% Passing Math** | **% Passing Reading** | **% Overall Passing** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cabrera High School | Charter | 1,858 | $1,081,356.00 | $582.00 | 83.1 | 84.0 | 94 | 97 | 91 |
| Griffin High School | Charter | 1,468 | $917,500.00 | $625.00 | 83.4 | 83.8 | 93 | 97 | 91 |
| Wilson High School | Charter | 2,283 | $1,319,574.00 | $578.00 | 83.3 | 84.0 | 94 | 97 | 91 |
| Pena High School | Charter | 962 | $585,858.00 | $609.00 | 83.8 | 84.0 | 95 | 96 | 91 |
| Wright High School | Charter | 1,800 | $1,049,400.00 | $583.00 | 83.7 | 84.0 | 93 | 97 | 90 |
| Shelton High School | Charter | 1,761 | $1,056,600.00 | $600.00 | 83.4 | 83.7 | 94 | 96 | 90 |
| Holden High School | Charter | 427 | $248,087.00 | $581.00 | 83.8 | 83.8 | 93 | 96 | 89 |
| Thomas High School | Charter | 1,635 | $1,043,130.00 | $638.00 | 83.4 | 83.9 | 67 | 70 | 65 |
| Bailey High School | District | 4,976 | $3,124,928.00 | $628.00 | 77.0 | 81.0 | 67 | 82 | 55 |
| Ford High School | District | 2,739 | $1,763,916.00 | $644.00 | 77.1 | 80.7 | 68 | 79 | 54 |
| Johnson High School | District | 4,761 | $3,094,650.00 | $650.00 | 77.1 | 81.0 | 66 | 81 | 54 |
| Hernandez High School | District | 4,635 | $3,022,020.00 | $652.00 | 77.3 | 80.9 | 67 | 81 | 54 |
| Huang High School | District | 2,917 | $1,910,635.00 | $655.00 | 76.6 | 81.2 | 66 | 81 | 54 |
| Figueroa High School | District | 2,949 | $1,884,411.00 | $639.00 | 76.7 | 81.2 | 66 | 81 | 53 |
| Rodriguez High School | District | 3,999 | $2,547,363.00 | $637.00 | 76.8 | 80.7 | 66 | 80 | 53 |

# How does replacing the ninth graders’ math and reading scores affect Thomas High School’s performance, relative to the other schools?

Comparing the sorted per school data from Table 3 and Table 4, the Thomas High School has been dropped from the second best performer to the eighth best performer high school.

# How does replacing the ninth-grade scores affect the Math and Reading Scores by Grade, Scores by School Spending, Scores by School Size, and Scores by School Type?

As shown in Table 5, the only change in the math and reading scores by grade summary data is that the 9th grader data is replaced by “nan”.

Table 5. Original and Revised Math Scores-by-Grade Summary Data

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Original** | | | | **Revised** | | | |
| **9th** | **10th** | **11th** | **12th** | **9th** | **10th** | **11th** | **12th** |
| Bailey High School | 77 | 77 | 77.5 | 76.5 | 77 | 77 | 77.5 | 76.5 |
| Cabrera High School | 83 | 83.2 | 82.8 | 83.3 | 83 | 83.2 | 82.8 | 83.3 |
| Figueroa High School | 76 | 76.5 | 76.9 | 77.2 | 76 | 76.5 | 76.9 | 77.2 |
| Ford High School | 77 | 77.7 | 76.9 | 76.2 | 77 | 77.7 | 76.9 | 76.2 |
| Griffin High School | 82 | 84.2 | 83.8 | 83.4 | 82 | 84.2 | 83.8 | 83.4 |
| Hernandez High School | 77 | 77.3 | 77.1 | 77.2 | 77 | 77.3 | 77.1 | 77.2 |
| Holden High School | 84 | 83.4 | 85 | 82.9 | 84 | 83.4 | 85 | 82.9 |
| Huang High School | 77 | 75.9 | 76.4 | 77.2 | 77 | 75.9 | 76.4 | 77.2 |
| Johnson High School | 77 | 76.7 | 77.5 | 76.9 | 77 | 76.7 | 77.5 | 76.9 |
| Pena High School | 84 | 83.4 | 84.3 | 84.1 | 84 | 83.4 | 84.3 | 84.1 |
| Rodriguez High School | 77 | 76.6 | 76.4 | 77.7 | 77 | 76.6 | 76.4 | 77.7 |
| Shelton High School | 83 | 82.9 | 83.4 | 83.8 | 83 | 82.9 | 83.4 | 83.8 |
| Thomas High School | 84 | 83.1 | 83.5 | 83.5 | nan | 83.1 | 83.5 | 83.5 |
| Wilson High School | 83 | 83.7 | 83.2 | 83 | 83 | 83.7 | 83.2 | 83 |
| Wright High School | 83 | 84 | 83.8 | 83.6 | 83 | 84 | 83.8 | 83.6 |

Table 6. Original and Revised Reading Scores-by-Grade Summary Data

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Original** | | | | **Revised** | | | |
| **9th** | **10th** | **11th** | **12th** | **9th** | **10th** | **11th** | **12th** |
| Bailey High School | 81.3 | 80.9 | 80.9 | 80.9 | 81.3 | 80.9 | 80.9 | 80.9 |
| Cabrera High School | 83.7 | 84.3 | 83.8 | 84.3 | 83.7 | 84.3 | 83.8 | 84.3 |
| Figueroa High School | 81.2 | 81.4 | 80.6 | 81.4 | 81.2 | 81.4 | 80.6 | 81.4 |
| Ford High School | 80.6 | 81.3 | 80.4 | 80.7 | 80.6 | 81.3 | 80.4 | 80.7 |
| Griffin High School | 83.4 | 83.7 | 84.3 | 84.0 | 83.4 | 83.7 | 84.3 | 84.0 |
| Hernandez High School | 80.9 | 80.7 | 81.4 | 80.9 | 80.9 | 80.7 | 81.4 | 80.9 |
| Holden High School | 83.7 | 83.3 | 83.8 | 84.7 | 83.7 | 83.3 | 83.8 | 84.7 |
| Huang High School | 81.3 | 81.5 | 81.4 | 80.3 | 81.3 | 81.5 | 81.4 | 80.3 |
| Johnson High School | 81.3 | 80.8 | 80.6 | 81.2 | 81.3 | 80.8 | 80.6 | 81.2 |
| Pena High School | 83.8 | 83.6 | 84.3 | 84.6 | 83.8 | 83.6 | 84.3 | 84.6 |
| Rodriguez High School | 81.0 | 80.6 | 80.9 | 80.4 | 81.0 | 80.6 | 80.9 | 80.4 |
| Shelton High School | 84.1 | 83.4 | 84.4 | 82.8 | 84.1 | 83.4 | 84.4 | 82.8 |
| Thomas High School | 83.7 | 84.3 | 83.6 | 83.8 | nan | 84.3 | 83.6 | 83.8 |
| Wilson High School | 83.9 | 84.0 | 83.8 | 84.3 | 83.9 | 84.0 | 83.8 | 84.3 |
| Wright High School | 83.8 | 83.8 | 84.2 | 84.1 | 83.8 | 83.8 | 84.2 | 84.1 |

Since Thomas High School is in $630-644 per-student-spending-range category, the only affected range is $630-644 spending range. While the average math and reading scores are approximately intact (numbers rounded to one decimal), the percent passing math, reading, and overall passing have decreased by 6, 7, and 7 percent, respectively.

Table 7. Original and Revised Scores-by-Spending Ranges (Per Student)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Original** | | | | | **Revised** | | | | |
| **Average Math Score** | **Average Reading Score** | **% Passing Math** | **% Passing Reading** | **% Overall Passing** | **Average Math Score** | **Average Reading Score** | **% Passing Math** | **% Passing Reading** | **% Overall Passing** |
| **Spending Ranges (Per Student)** |  |  |  |  |  |  |  |  |  |  |
| <$584 | 83.5 | 83.9 | 93 | 97 | 90 | 83.5 | 83.9 | 93 | 97 | 90 |
| $585-629 | 81.9 | 83.2 | 87 | 93 | 81 | 81.9 | 83.2 | 87 | 93 | 81 |
| $630-644 | 78.5 | 81.6 | 73 | 84 | 63 | 78.5 | 81.6 | 67 | 77 | 56 |
| $645-675 | 77 | 81 | 66 | 81 | 54 | 77 | 81 | 66 | 81 | 54 |

Since Thomas High School is a medium size school based on our defined category, the only affected category is Medium School Size category. While the average math and reading scores are approximately intact (numbers rounded to one decimal), the percent passing math, reading, and overall passing has all decreased by 6 percent.

Table 8. Original and Revised Scores-by-School Size

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Original | | | | | Revised | | | | |
| **Average Math Score** | **Average Reading Score** | **% Passing Math** | **% Passing Reading** | **% Overall Passing** | **Average Math Score** | **Average Reading Score** | **% Passing Math** | **% Passing Reading** | **% Overall Passing** |
| **School Size** |  |  |  |  |  |  |  |  |  |  |
| Small (<1000) | 83.8 | 83.9 | 94 | 96 | 90 | 83.8 | 83.9 | 94 | 96 | 90 |
| Medium (1000-2000) | 83.4 | 83.9 | 94 | 97 | 91 | 83.4 | 83.9 | 88 | 91 | 85 |
| Large (2000-5000) | 77.7 | 81.3 | 70 | 83 | 58 | 77.7 | 81.3 | 70 | 83 | 58 |

Since Thomas High School is a charter school based on our defined category, the only affected category is Charter school type category. While the average math and reading scores are approximately intact (numbers rounded to one decimal), the percent passing math, reading, and overall passing has all decreased by 4, 4, 3 percent, respectively.

Table 9. Original and Revised Scores-by-School Type

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Original | | | | | Revised | | | | |
| **Average Math Score** | **Average Reading Score** | **% Passing Math** | **% Passing Reading** | **% Overall Passing** | **Average Math Score** | **Average Reading Score** | **% Passing Math** | **% Passing Reading** | **% Overall Passing** |
| **School Type** |  |  |  |  |  |  |  |  |  |  |
| Charter | 83.5 | 83.9 | 94 | 97 | 90 | 83.5 | 83.9 | 90 | 93 | 87 |
| District | 77 | 81 | 67 | 81 | 54 | 77 | 81 | 67 | 81 | 54 |