For this task, I was asked to analyze district-wide standardized test results to help the school board and mayor make strategic decisions regarding future school budgets and priorities.

**Relevant Background Information:**

* There are 15 schools (7 District and 8 Charter)
* There are 39,170 students
* The largest school is Bailey High School with 4976 students, and the smallest school is Holden High School with 427 students.
* The total budget for all schools is $24,649,428
* Each school has a total budget in between $248,087 and $3,124,928, which correlates to a range of $578 to $655 per student.

**General Statistics**

* The average math score for the whole district was 78.99%, with 74.98% of students passed the math exam
* The average reading score for the whole district was 81.88%, with 85.81% of students passed the reading exam
* 65.17% passed both exams.

Even though the average scores for math and reading were relatively close (less than 3 points apart), there was a significant difference between the percentages of students who passed each exam (almost 11% difference). Taking a closer look at the data, the lowest score on the reading exam was a 63, with 750 students receiving this score, while the lowest score on the math exam was 55, with 4804 students scoring less than a 63 on the math exam.

**Overall Passing Percentage by School Type**  
When focusing on the Overall Passing Percentage (the percent of students who passed BOTH the reading and math exams), the 8 Charter schools significantly outpaced the District schools. The 8 Charter schools had overall passing percentages ranging from 89.2% to 91.3%, while the 7 District schools range from 53.0% to 54.6%. Based on this data, Charter schools score significantly higher than District schools.

*Questions I have about the data:*

* *Do students receive a score if they do not take the exams? (maybe the thousands of 55’s on the math exam were students who did not actually take the exam and were assigned that score)*
* *Are students forced to take the exams?*

**Overall Passing Percentage by Budget**When comparing schools by their per student budget (Total Budget divided by Student Count for each school), schools were grouped into four categories: <$585, $585-630, $630-645, $645-680. The highest achieving schools, in terms of overall passing percentage, were in the lowest per student budget category. The lowest achieving schools were in the highest per student budget category. The 4 schools that spent <$585 per student were all Charter schools, while the 3 schools in the $645-680 category were all District schools. We can draw a conclusion that a higher school budget and higher per student budget does not correlate with higher state exam scores.

**Overall Passing Percentage by School Size**Based on the data from this district, small and medium school sizes have an Overall Passing Percentage around 90% while large schools have an Overall Passing Percentage around 58%. There are 8 large schools in the district, 7 of which are District. The one large Charter school had an overall passing percentage of 90.6%, which is an outlier when compared to the other large schools. Wilson High School (the large charter school) scored similarly to the other Charter schools, independently of size. Looking at the School Size data independently, I would draw the conclusion that large schools score significantly lower than small and medium schools. However, I believe that it is hard to draw this conclusion when you take other factors into account, mainly school type.