**Summary of analysis and two correct conclusions or comparisons from the calculations**

**1. Budget Analysis and Performance:**

* **Observation**: Schools with higher per-student budgets did not yield better test results; those spending $645-$675 per student underperformed compared to schools spending $585 per student.
* **Recommendations**:
  + **Adjust for Context**: Consider whether higher budgets are allocated to schools serving economically disadvantaged populations or those with additional needs, which might affect outcomes.
  + **Analyze Spending Categories**: Break down the budget into categories (e.g., teacher salaries, technology, facilities) to identify if spending patterns impact performance.

**2. School Size and Performance:**

* **Observation**: Smaller and medium-sized schools outperformed large schools in passing math performance (89-91% vs. 67%).
* **Recommendations**:
  + **Student-to-Teacher Ratio**: Examine whether smaller schools benefit from lower student-to-teacher ratios, potentially providing more individualized attention.
  + **Classroom Dynamics**: Consider the impact of class sizes on teaching effectiveness and student engagement.
  + **Resource Allocation**: Assess whether large schools face resource distribution challenges that affect performance.

**3. Charter vs. Public District Schools:**

* **Observation**: Charter schools outperformed public district schools across all metrics.
* **Recommendations**:
  + **Student Demographics**: Investigate demographic differences (e.g., socioeconomic status, English proficiency, special education needs) that may influence outcomes.
  + **School Practices**: Analyze differences in instructional methods, curriculum flexibility, and governance between charter and district schools.
  + **Population Size Impact**: Evaluate whether the smaller average size of charter schools explains part of their success.

**4. Additional Analyses:**

* **Longitudinal Data**: Examine performance trends over multiple years to determine if these patterns persist or fluctuate.
* **Qualitative Data**: Incorporate qualitative insights, such as teacher and student surveys, to understand the context behind the numbers.

**5. Presentation Suggestions:**

* **Visualizations**: Use of charts and graphs to highlight key comparisons, such as budget vs. performance or size vs. performance can be included.
* **Limitations**: Any data limitations or assumptions should be provided in context for the analysis in order to better interpret results.

**References:**

Chatgbt,

<https://www.w3schools.com/python/>

https://www.w3schools.com/python/pandas/default.asp