```
import pandas as pd

schools = pd.read_csv("schools.csv")

schools.head()
```

```
                                        school_name     borough
building_code  \
0  New Explorations into Science, Technology and ...  Manhattan
M022
1                           Essex Street Academy       Manhattan
M445
2                      Lower Manhattan Arts Academy    Manhattan
M445
3    High School for Dual Language and Asian Studies  Manhattan
M445
4       Henry Street School for International Studies  Manhattan
M056

   average_math  average_reading  average_writing  percent_tested
0           657              601              601             NaN
1           395              411              387            78.9
2           418              428              415            65.1
3           613              453              463            95.9
4           410              406              381            59.7
```

Which NYC schools have the best math results?

```
best_math_schools = schools[schools["average_math"] >= 640]
[["school_name", "average_math"]].sort_values("average_math",
ascending=False)
best_math_schools
```

```
                                        school_name  average_math
88                       Stuyvesant High School               754
170                  Bronx High School of Science           714
93              Staten Island Technical High School       711
365  Queens High School for the Sciences at York Co...          701
68   High School for Mathematics, Science, and Engi...          683
280                  Brooklyn Technical High School        682
333                     Townsend Harris High School        680
174  High School of American Studies at Lehman College     669
0    New Explorations into Science, Technology and ...          657
45                   Eleanor Roosevelt High School       641
```

What are the top 10 performing schools based on the combined SAT scores?

```
schools["total_SAT"] = schools["average_math"] +
schools["average_reading"] + schools["average_writing"]

top_10_schools = schools.sort_values("total_SAT", ascending=False)
[["school_name", "total_SAT"]].head(10)
top_10_schools
```

```
                                        school_name  total_SAT
88                       Stuyvesant High School            2144
```

```
170                        Bronx High School of Science       2041
93            Staten Island Technical High School             2041
174   High School of American Studies at Lehman College       2013
333                      Townsend Harris High School          1981
365   Queens High School for the Sciences at York Co...       1947
5                     Bard High School Early College           1914
280                  Brooklyn Technical High School            1896
45                    Eleanor Roosevelt High School            1889
68    High School for Mathematics, Science, and Engi...        1889
```

Which single borough has the largest standard deviation in the combined SAT score?

```python
boroughs = schools.groupby("borough")["total_SAT"].agg(["count",
"mean", "std"]).round(2)

largest_std_dev = boroughs[boroughs["std"] == boroughs["std"].max()]

largest_std_dev = largest_std_dev.rename(columns={"count":
"num_schools", "mean": "average_SAT", "std": "std_SAT"})
largest_std_dev
```

```
          num_schools   average_SAT   std_SAT
borough
Manhattan            89       1340.13    230.29
```