

Quantitative analysis of a data sample

[Science](#), [Statistics](#)



quantitative analysis of a data sample Q1 Mean = 227. 83 2. Q2 SD 47 3. Q3 225. 53 50th percentile 4. Q4 228. 53 75th percentile Taking the answers to #3 and 4, what percent of students have a score between these 2 limits?
25%

5. Repeat questions 1-5 for boys in grades 4-5.

Q1

Mean = 223. 83

Q2

SD = 1. 36

Q3 222. 47

25th percentile

Q4 225. 19

50th percentile

Taking the answers to #3 and 4, what percent of students have a score between these 2 limits? 25%

6. Q6

Females had the higher mean score in English. The difference is significant (p-value = 0. 024)

7. Q7

The correlation co-efficient = -0. 2072. As behavior referral increases, there is a drop in performance in English

8. Q8= 0. 1833

9. Q9

Whites perform better in English as compared to other races and have the highest mean score among the 5 race categories. The mean score for whites

in English MCAS is 241. 6 and is followed by Asians with a mean of 235. 2. Blacks, Hispanics, and Other races are closely tied at 224. 85, 224. 13, and 223 respectively. This is shown below:

Race	Mean	Std. Dev
Asian	235. 2	3. 666061
Black	224. 8462	1. 504489
Hispanic	224. 125	1. 329958
Other	223	10. 34408
White	241. 6	6. 794115
10. Q. 10		

The hypothesis is that race affect a student's performance in English exams. This is the null hypothesis. The alternative hypothesis is that the differences in group means is not significant.

We use ANOVA to test this hypothesis:

From the analysis, we obtain a p-value of 0.0025 and hence conclude that performance in English is affected by race.