

CALIFORNIA STATE SCIENCE FAIR 2009 PROJECT SUMMARY

Name(s)

Saira Delgado

Project Number

J0610

Project Title

Comparing International Math Test Results Using an American Standardized Test

Abstract

Objectives/Goals

The objective of my project was to learn if Japanese students could outperform American students in an American mathematics standardized test, and if so, why.

Methods/Materials

Print out California Standardized Test Grade 7 Mathematics. Select 10 questions of different standards from California Standardized Test Grade 7 Mathematics Released Questions. Translate selected questions of test to Japanese. Make 70 copies of test. Obtain 70 Japanese eighth grade students from a Japanese public school. Test students in class after three months of school in session from the beginning of the year. Time ten (10) minutes for students to complete test. When all students have completed the test, collect tests. Score all tests. Repeat the testing process for 56 American public school students. Input scores into computer, and compare Japanese and American results.

Results

The American females scored on average 0.1125 points higher than the Japanese females. The Japanese females had an average 6.2 points out of a possible 10. The American females scored 6.3125 points. The Japanese males scored on average 6.54 points out of 10 possible. The American males scored on average 1.165 points lower and scored an overall average of 5.375 points. In general, with the averages of male and female students, the Japanese scored higher by about 0.53 points out of 10.

Conclusions/Discussion

The Japanese students scored higher than the American students overall. A surprising point of my results was that the American females scored higher than the Japanese females did. However, the Japanese males scored higher than the American males did. I think that the American students should strive to outperform the Japanese students in worldwide math tests. If the American students perform better in school, it can influence the rest of their education, their career, and the rest of their life.

Summary Statement

My project's main focus is if Japanese students, similar to international test results, can outperform American students on an American standardized test and if so, why.

Help Received

Mr. Yuichi Shibuya, principal of Iko Middle School, Tokyo, Japan, supervisor of Japanese student testing; Mr. Jeff Shahbazian, middle school math teacher of Sanger Academy Charter School, Sanger, CA, supervisor of American student testing