CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY

Name(s)
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Project Number
J0202

Project Title
What Variable Changes the Speed of the Tennis Ball the Most and Why?

Abstract

Objectives/Goals
My projects goal was to see which of my 27 variables(strings,racquet weight,and serve type)affected the speed of the tennis ball the most .I also wanted to find ou twhy these variables affected it.

Methods/Materials
Method:
1.Place radar on court in service box
2.Serve from baseline of tennis court
3.Repeat steps 1 and 2 23 times
4.Repeat steps 1,2, and 3 for each variable

Results
The heavy racquet with the loose strings had the fastest serve on average,the light racquet with the loose strings had the second highest serve on average,The medium weight racquet with the average tightness of strings had the slowest serve on average.

Conclusions/Discussion
My project was succesful.I found which variables affected the serve and why.Why?The loose strings gave the ball great speed because it acted as a slingshot,it pulled the ball back and then released it.The heavy racquet weight gave the racquet great speed because it gave it momentun from the weight.Because the racquet gained speed so did the ball making the serve faster.The light racquet when swung fast enough gave the ball great speed because the racquet had speed.

Summary Statement
My project is about finding out which variable that I used would change the speed of the ball the most and why this was.

Help Received
Mother edited,used radar gun of Alan Guthry,Miss.Gray viewed board and offered tips,tennis coach,Shannon Smith helped come up with idea for project.