



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Robyn J. Swift	Project Number J1320
Project Title Time for Primes Phase II: Experimental Verification of the Prime Number Theorem	
Abstract Objectives/Goals The average distance between prime numbers is calculated using a random sampling method. The average distance between the primes up to a positive integer n is numerically showed to be approximately $\ln(n)-1$. Methods/Materials A random sampling method is used both by hand and using the computer program mathematica to calculate the average distance between consecutive prime numbers. Results The average distance between prime numbers is shown to be approximately $\ln(n)$. Conclusions/Discussion The data obtained experimentally verifies the prime number theorem.	
Summary Statement To experimentally show that the average distance between consecutive primes increases.	
Help Received Parents helped assemble display board.	