



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Deanna Lynn McKinstry	Project Number J1215
Project Title Goldbach's Conjecture: True or False?	
Objectives/Goals To find out if there is a number that will disprove Goldbachs Conjecture, which states that every even number greater than 2 is the sum of two primes, by writing a computer program to test numbers from 4×10 to the 14th power through 4×10 to the 15th power.	
Abstract	
Methods/Materials <ul style="list-style-type: none">· Microsoft Qbasic· Microsoft Visual Basic· Dell 1.9 GHZ Pentium 4 Computer with 256 MB of RAM· Floppy Disk· Elementary Basic: Learning to Program Your Computer in Basic with Sherlock Holmes by Henry Ledgard and Andrew Singer, 1982	
<ol style="list-style-type: none">1. Learn how to program with help from Elementary Basic and computer scientist2. Find out what numbers have already been tested to see if they are the sum of two prime numbers3. Write the program4. Test, revise, and fix the program5. Run the program for 29 days	
Results The program took 29 days to search from 4×10 to the 14th power through 400000001068266 and the program did not find a number that disproves Goldbachs Conjunction.	
Conclusions/Discussion The results did support my hypothesis which stated that there is not a number (in the numbers searched) that will disprove Goldbachs Conjecture. The information gained in this subject expanded our knowledge about mathematics by using modern technology to test an old theory.	
Summary Statement My project tries to disprove Goldbach's Conjecture using a computer program.	
Help Received Father taught me how to program.	