Name(s)	Project Number
Jeremy P. Hanlon	**J1405**

Project Title

Solving It! A Computer Programming Language that Solves Linear and Quadratic Equations and Shows Its Work

Abstract

Objectives/Goals
The purpose of my Science Fair invention is to develop a computer programming language that solves linear and quadratic equations and shows its steps in the process of solving them. The goal is to solve equations quicker and more accurately and to be able to use the invention to learn or teach others.

Methods/Materials
Materials:
Computer with Python programming language installed
Text editor

Methods/Steps
(abbreviated below- more detailed steps are summarized on my board and detailed in my report):
Input programming code/script.
Run program script.
Test linear and quadratic equations.
Fix errors in programming.
Retest equations.

Results
My invention correctly solves linear and quadratic equations and shows its steps involving in solving the problems. I tested many different equations, fixed errors I found in my coding/programming, and ran the program more than 200 times.

Conclusions/Discussion
The results of my Science Fair inventioned achieved my goal and purpose. The language I developed solves linear and quadratic equations and shows its work. My invention is useful because someone can use it to check homework, learn how to solve these types of equations, and solve mass equations quickly and accurately. It was challenging and fun for me to work on this invention. In the future, it would be useful to expand the invention to run more types of math problems (like exponential equations) and to enable it to read handwriting. This type of invention can be useful to others who are working on projects that require computer programming solutions.

Summary Statement

My Computer Science invention is a programming language that solves linear and quadratic equations and shows the process steps involved in getting to the solution.

Help Received

A tutor reviewed my programming code, offered suggestions on simplifying and testing the code, and reviewed my written report.