Team Number: LAHS-3

School Name: Los Alamos High School

Area of Science: Mathematics

Project Title: Efficient Retrieval of Irrational Numbers

This project is about creating a program that can retrieve any sequence length of a particular section of a predetermined irrational number. In particular, the beginning program will focus on mathematical constants. This program should make specific retrieval of specific sequences of irrational numbers much more efficient. Essentially, given a predetermined number of irrational or transcendental numbers in a predetermined order, the program will find the specified values. The mathematics behind this idea is if you have 4 irrational numbers, in a set order, then you would apply the function mod 4 of n to find all the points where a graph of that function equals 0. You would find that this pattern repeats every 4 intervals starting at 0. That coordinate plane that was used would then be superimposed by a series of natural numbers that would be intervals of the mathematical constants. For example, if you wanted to encode pi as the first number, then the first 0 would be superimposed by 3, the second 0 would be 1, the third zero 4, and so on. So to find all digits of the 2nd term you used, you would simply apply the function mod 4 of n +1. The program will request user input information, and then proceed to solve for the requested x-intercepts on the modified coordinate plane.

Team member(s):

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