Interim report

School name: Los Lunas middle school
Area of science: mathematics
Project name: Boomerang fractions

Project introduction

Mathematician Mr. James Taylor introduced this problem to us during a math circle.
To introduce our project, you have to first introduce the problem. Our problem is to see why the longevity of a specific fraction is different from the longevity of a different fraction. A longevity is how long it takes to get back to one using to operations after adding one to that fraction. We tested our problem by making a Microsoft Excel program to find an answer. We used the fractions 1/2 and 2/9. The longevity of 1/2 is 4 and the longevity of 2/9 is 16. We then needed more information on how and why these things happened. So, to start you need to add the fraction to 1. Perhaps the fraction is 1/2. By doing this you get as your start 1 1/2. Then you have the option of adding the fraction again or doing the reciprocal.

Project problem and solution:

Our problem is, to find why certain fractions have a different longevities compared to others. We made a program on Microsoft excel that computes these thing automatically. The operations, are adding the fraction or doing the reciprocal of the fraction you have already. For example, for the fraction 1/2 you would end up with something like this using our program.

1 – 3/2– 2 - 1/2 – 1

This example explains the longevity as being 4. This helps us create a solution to help solve our interesting problem by giving us a “serving size” of longevities to work with to further our research into why each fraction has its own or random longevity by comparing them.

The results we expect:

Now that we have explained our project and the way would like to solve it, we will now explain how we would like to end our project. We expect to create a wide scale yet accurate program and diagram to show this quicker and faster. This would help us to continue to further investigate more complex fractions to analyze more longevities in hopes of creating an accurate thesis, as to why each fraction has its own longevity.

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