SPEAKER: William Gasarch

TITLE: The Muffin Problem

ABSTRACT

Lets say you have 5 muffins and you want cut them up and give them out to Alice, Bob, and Carol so that they each get 5/3. This is easy- You can cut each one into 1/3-1/3-1/3 and give each person five 1/3-pieces.

But then the smallest piece is 1/3.

Can we do better?

Is there a way to divide 5 muffins for 3 people so that the smallest piece is BIGGER than 1/3?

What is the BEST you can do?

More generally: Given m muffins and s students, how can you divide m muffins for s students to that each student gets m/s and the SMALLEST piece is MAXIMIZED?

We will discuss various techniques to solve this problem. We will also discuss why this was a good research project.