Binary, Ternary, and Cantor
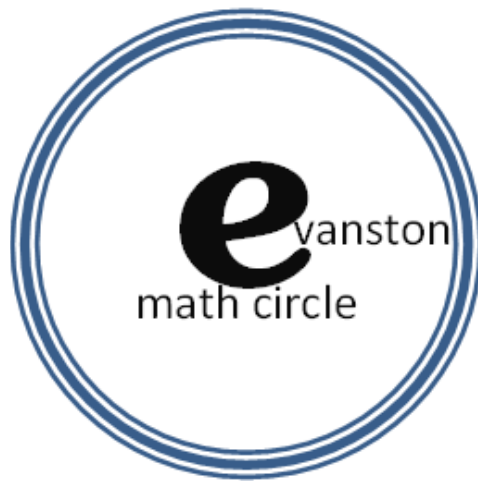
Take the numbers between 0 and 1 and throw away the "middle third" of them occurring between 1/3 and 2/3. Now you're left with the numbers between 0 and 1/3 *and* between 2/3 and 1. Take each of these two groups of numbers and throw away the "middle thirds" of each, to be left with the numbers between 0 and 1/9, between 2/9 and 1/3, between 2/3 and 7/9, and between 8/9 and 1. And so on, continue this process by removing "middle thirds" at each step forever and ever. How many numbers are you actually left with and how can you possibly describe them concretely? We'll explore the math behind this problem and more! Come join us at the

EVANSTON MATH CIRCLE
Saturday, November 11

Northwestern University
Lunt Hall Room 218, 11:00 AM to 12:30pm

Math Circle is geared towards middle- and beginning high-school students, but students of other ages and backgrounds are welcome as well. More information is available at http://www.math.northwestern.edu/~scanez/mathcircle/