Radical Pi presents:

The (3n + 1)-Problem

160

80

64

32

16

8

4

2

1

26

13

10

24

12

by Matthew Kahle

Start with any natural number n, and apply the following rule: If n is even, replace n by n/2. If n is odd, replace n by 3n + 1. Now repeat the process. The Collatz conjecture is that no matter what number n you start with, you eventually hit 1. The problem has been around for 75 years, though, and no one has been able to prove it.

We will discuss what is known, and especially connections to various areas of math: number theory, ergodic theory, and fractal geometry.

Wednesday, February 27, 5 PM Undergraduate Math Study Space (MA 052) Free pizza!