

*Student  
Seminar*

*Pi Mu Epsilon*  
& GAMECOCK MATH CLUB



Chanequa Roy

Fibonacci Sequence

and

Math Induction



Emily McDowell

In 1202, Leonardo Fibonacci introduced the Fibonacci numbers  $\{f_n\}_{n=1}^{\infty}$  in his studies involving the growth of a population of rabbits. The numbers are recursively defined by

$$\begin{aligned}f_1 &= 1 \\f_2 &= 1 \\f_n &= f_{n-1} + f_{n-2} \quad \text{for } n \geq 3.\end{aligned}$$

Since, the Fibonacci numbers have been used to model many natural phenomena. For example, the number of bootjacks on a palmetto tree, South Carolina's official state tree, is a Fibonacci number.

USC math major Chanequa Roy will present her summer research on Fibonacci numbers. She studied with Dr. Johnson through the SCAMP program. Then USC graduate student Emily McDowell will give a presentation on math induction. And then, for fun, we will work together in groups on some math induction problems.

Tue. 25<sup>th</sup> Sept. 2012  
7:00 pm  
LeConte 310  
after the PME Fall Initiation Ceremony

Event supported in part by  
USC's Student Organizations.

For more info visit PME/GMC on FaceBook and at <http://www.math.sc.edu/~pme/>.