

## **Problem 1: Eating Nachos with Fibonacci Numbers**

---

Two children eat nachos in turns, taking the next number in the Fibonacci sequence: 1,1,2,3,5,8,13,..., restarting from the beginning if the next number is greater than the remaining nachos.

What is the smallest number of nachos less than 500 that requires the most restarts?

As always, show your work, fully explain and justify your answer.

---

Posting Date 8/28/16. Submit solutions to Noah Aydin, Mathematics Department, RBH 319 (e-mail or hard-copy, but hard copy submissions must include a time stamp) by 4 pm on 9/8/16.