

# Fibonacci Sequence Gransbury

Isabella Gransbury  
MATH 361

February 15, 2019

**Problem 1.** The multiples of 4 in the first 50 Fibonacci Numbers are: 8, 144, 2584, 46368, 832040, 14930352, 267914296, 4807526976.

**Problem 2.** The percentage of the 1st 10,000 Fibonacci numbers that are even is: 33.32%.

**Problem 3.** One conjecture my table made about the multiples of the Fibonacci Sequence relates the percentage to the multiple being tested and that same number squared. This relationship can be expressed by the following statement:

The percent desired of a power of 3 =  $\frac{\text{the percent of multiples of 3}}{3 \text{ to the power of one minus the desired power}}$ .  
An example:

$$\text{Percent of multiples of } 3^3 = \frac{25}{3^2}$$