**Homework 4**

Drumea Matei

In the code that I wrote, I first off solved the sum in the “normal”, more mathematical way. As in, I did the operations in this exact order: 1 – 1/2 + 1/3 - … +/- 1/n and showed the result for 4 sums increasing in size.

A screen shot of a computer program

Description automatically generated this being the code in question.

After this block of code I did n operations as such: p additions, q subtractions, p additions and so on (additions being: 1, 1/3, 1/5 … 1/(2\*n+1) and subtractions being: -1/2, -1/4 … -1/(2\*n)).

A screen shot of a computer program

Description automatically generatedthe final block of code.

Here are a few examples:

A screenshot of a computer screen

Description automatically generatedA screenshot of a computer screen

Description automatically generated

A screenshot of a computer screen

Description automatically generatedA screenshot of a computer screen

Description automatically generated

Alas, I want to mention that I wrote this explanation a while after I had finished writing the code, and this time when I took these screenshots I got *way* different results than yesterday. Speaking of only the second half of the table, yestereve all I was getting, regardless of the size of the length and p and q, was results surrounding 2, with a very small margin of error (i.e. when p>q the result was 2.004 something and when q>p the result was 1.91… or 1.87…). Weird. Literally changed nothing since then.

And finally, the rest of the homework exercises:

A piece of paper with math equations

Description automatically generated

The git repository: https://github.com/drmatei/Analysis.git