CSE 380 **Discrete Mathematics II**

About Continued Fractions

January 26, 2021 *Teach One Another*

An Ancient Fascination

`https://en.wikipedia.org/wiki/Continued_fraction`

Study and Understand

The sample code below builds on the code you studied yesterday in your Divide Pair Conquer exercise. The idea is to compute the Continued Fraction Representation (CFR) of both rational and irrational numbers.

Adapted from: `https://stackoverflow.com/questions/36077810/continued-fractions-python`

Code can be found in the supplied `contfrac.py` file.

Calculate and Compare

Find and compare the CFRs of the irrational square root of 2 and the rational number 1393/985. Compare both of those CFRs with the CFR of the golden ratio, phi, which is the value that is one-half of the quantity one more than the square root of five.