Math 8   Assignment 3

Due: Start of class on Friday April 16.

The goal of this assignment is to approximate the constant π. Use the methods and error estimates of Section 7 of Chapter 8 to estimate π to six digits.

A hint that may help: $(\arctan(x))' = \dfrac{1}{1 + x^2}$

There will be a lot of calculations, and the sums will be long. You may use a calculator or computer program but be sure to explain all your reasoning, steps, and formulas you used.

Be sure to include a conclusion explaining "why we care."