CS 323E

Homework 1

Due: Sept 7, 2000

1. Read Sections 1.1 and 1.2 from the textbook (nothing needs to be turned in).
2. Run the MATLAB script file **SinePlot** given on pages 14-15 (bottom of page 14 and top of page 15). Turn in **only** the plot for $n = 200$.
3. Do problem P1.2.3 from the textbook.
4. Write a short section of MATLAB code to compute $P_2, P_3, \ldots P_{40}$, where

$$\begin{aligned} P_{n+1} &= 2^n \sqrt{2\left\{1-\sqrt{1-\left(\frac{P_n}{2^n}\right)^2}\right\}}, \quad \text{for } n = 2, 3, \ldots \\ P_2 &= 2\sqrt{2}. \end{aligned}$$

   Do the P_n serve as good approximations to π?