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 plots for $n = 4$ and $n = 200$.

3. Do problem P1.2.3 from the textbook.

4. Write a MATLAB function to compute P_n, where

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

$$P_2 = 2\sqrt{2}.$$

   For your function, you should create a text file called myFunc.m (or choose a different name). On the first line of the file, write: function p = myFunc(n). This says that myFunc is a MATLAB function that takes n as an argument and outputs p.

   Compute and print out P_n for $n = 2, 3 \ldots 40$. Does P_{21} seem to approximate π? What about P_{30}?