


3. Problem 19.6, p.545 Chapra & Canale.

4. Problem 19.8, p.545 Chapra & Canale. Use MATLAB to plot. Can you guess the pattern of coefficients? What is the limit function?

5. (Based on problem 19.20, p.545 Chapra & Canale.)
   (a) Use MATLAB to generate 64 points from $t = 0$ to $t = 2\pi - \pi/32$. Evaluate $f(t) = \cos(3t) + \sin(10t)$ at these points. Apply the MATLAB function fft to this vector to obtain the vector $F$ and explain the results.
   (b) Plot $|F(n)|$ against $n$. What does this plot show?
   (c) Now let’s add some noise to the system. Let $g = f + \text{rand}(1, 64) - .5$

6. What is Gibbs phenomenon?