1. P 3.2.- Let x = -5 - 8i and y = 10 - 5i. Use Matlab to compute the following expressions. Hand-check your answers.

   a. The magnitude and angle of xy
   b. The magnitude and angle of x/y

2. P 3.6.- The capacitance of two parallel conductors of length L and radius r, separated by a distance d in air, is given by

$$C = \frac{\pi \epsilon L}{ln[(d - r)/r]}$$

   where ϵ is the permitivity of air ($\epsilon = 8.854 \times 10^{-12}$ F/m).

   Write a script file that accepts user input for d, L, and r and computes and displays C. Test the file with the values L = 1 m, r = 0.001 m, and d = 0.004 m.

3. P 3.8.- Write a function that accepts temperature in degrees Fahrenheit (^{o}F) and computes the corresponding value in degrees Celsius (^{o}C). The relation between the two is

$$T^{o}C = \frac{5}{9}(T^{o}F - 32)$$

   Be sure to test your function.