Write a matlab function for each of the following cases:

1. The user inputs the voltage and the value of two resistors and the function calculates and outputs the voltage across each of the resistors

2. The function calculates the parallel equivalent and the series equivalent of a fixed number of resistors

3. The function calculates the parallel equivalent and the series equivalent of a variable number of resistors, the function will ask the user to input the number of resistors then to input each value of the resistors one by one

4. The function plots the voltages across the resistor and the inductor in an RL circuit (charging) and plots the current in the circuit on a different plot

5. The function plots the voltage across the capacitor and the voltage across the resistor in a discharging RC circuit, the plot are made using the subplot command

6. The function takes as an input two complex numbers and outputs their, summation, subtraction, multiplication, division and their conjugates

7. The function converts an angle from radians to degrees and from degrees to radians

8. The user enters the frequency and the phase shift in radians and the function plots 5 cycles of the given sine wave