Elements of Power System Lab

Tutorial – I

Q.1. (a) Compute the root-mean-square (RMS) value of the vector by using the commands sqrt(), mean(), and .^

(b) Make a graph of y = sin(x), for x on the interval x=0, to x = 10

Q.2. Solve the set of linear algebraic equations:
3a + 7b -1.5c = 9 ; 3.2b + c = 2 ; (1/9)a -12b = 0

Q.3. Plot sin(x) and cos(x) over [0,2π], on the same plot with different colours

Q.4. Find the magnitude and angle of z = 5-3j

Q.5. $v = \frac{(5+j9)(7+j)}{3-j2}$

Find the real and imaginary part of a complex number,*v*.

Q.6. Find the roots of $A= 5s^2+3s+2$

Q.7. Find the value of the expression, $y = e^{-a} \sin(x) + 10\sqrt{y}$, for $a = 5$, $x = 2$, and $y = 8$.

Q.8. If R = 10 Ohms and the current is increased from 0 to 10 A with increments of 2A, write a MATLAB program to find current, voltage and power dissipation.