

EEN 271 Numerical Engineering Methods Spring 2019 HW # 3

Q1. Problem 9.1

Q2. Prob. 9.2

Q3. Prob. 9.4 -Use **MATLAB** to get the graphical solution and show your **code** and **graph**.

Q4 Prob. 9.10

Q5 Prob. 9.13

Q6. Prob 12.28

For the electrical circuit shown in **P12.28**, do the following:

- a- **Write** the system equations using mesh currents method.
- b- **Find** the circuits currents: i_1 , i_2 , and i_3 . Using **Inverse** method,
- c- **Solve** the system equations using **MATLAB** using inverse matrix solution.

Q7 Find the inverse of the system shown in **Q5 Prob9.13**, using:

- a- **Gauss-Jordan**
- b- **L U decomposition**

Q8 Solve the system using **Guass-Seidel** iterative methom in **Example 11.3** with initial guess values :

$$x_1=1$$

$$x_2=1$$

$$x_3=1$$