Name:

ID :

PRINCIPLES OF EE1

Homework #2 - Group 03

Submission deadline: October 5, 2020.

IMPORTANT: You should hand in a copy of your report that contains a full and detailed description of all the work done on the homework. Marks will be deducted if there are sign of violation of regulation and late submission (20% for each day). ***You should print out this document and write down your solution directly on it.***

Tip: You should draw a bounding box for your final answer. Ex: $Y = ABC + AC = \boxed{ABC}$

Problem 1: **(25 marks)**

Consider the voltages at the nodes in Fig.1 by two methods

a/ use the traditional way – a system of equations

b/ use Cramer's rule

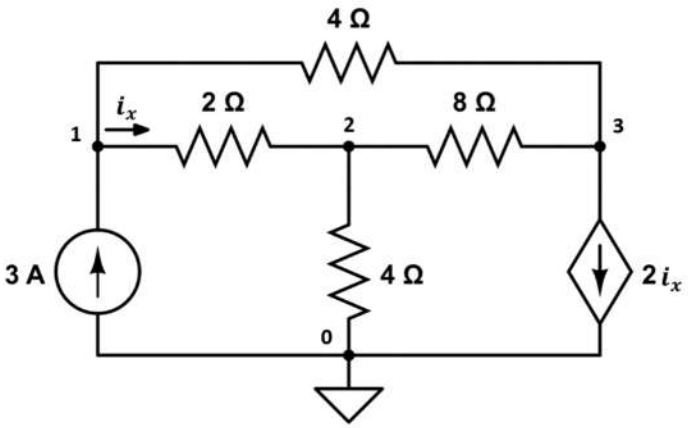

Figure 1

Ans

Problem 2: **(25 marks)**

Use the node-voltage method to find v_1 and v_2 in the circuit in Fig. 2

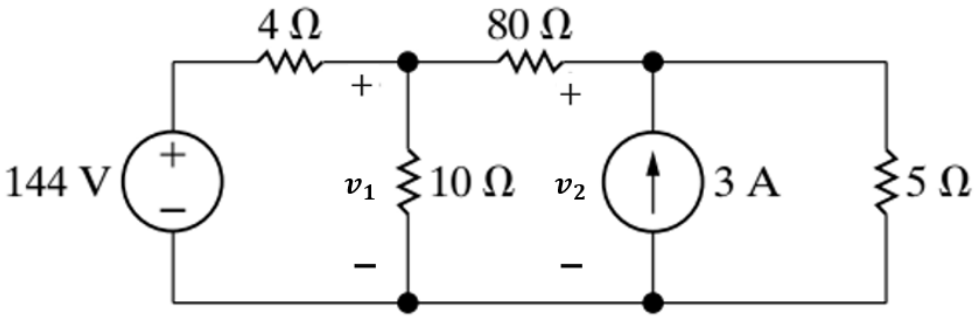

Figure 2

Ans

Problem 3: **(25 marks)**

Find the values of v_1, v_2 and v_3 for the circuit in Fig. 3

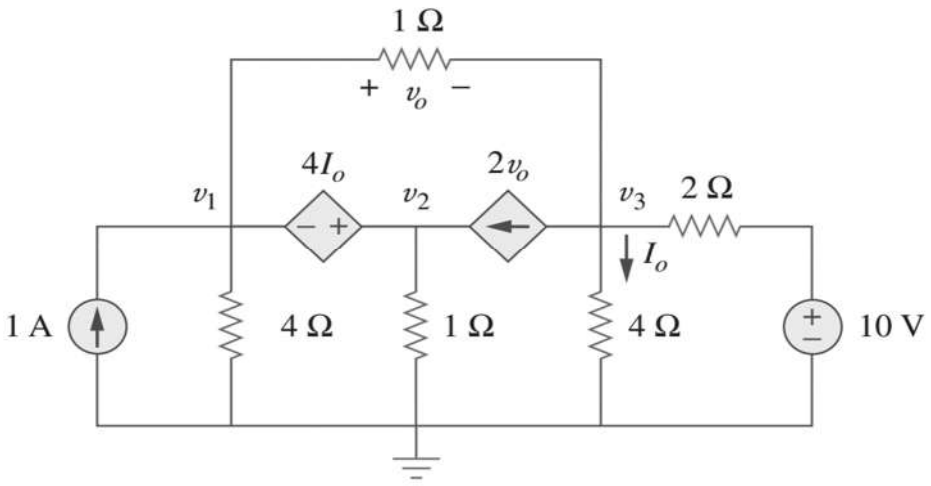

Figure 3

Ans

Problem 4: **(25 marks)**

Determine v_3 and Current i_1, i_2 and i_3 in the following Fig.4 by using Mesh analysis

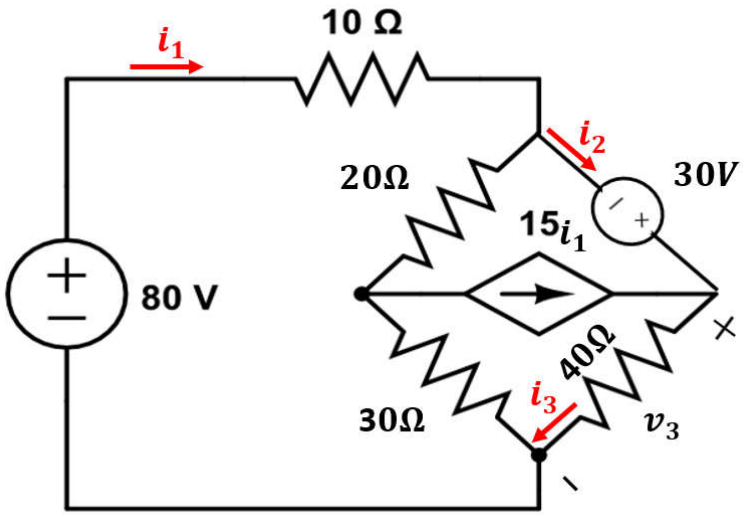

Figure 4

Ans