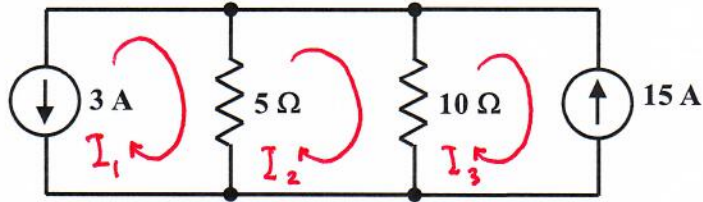


EE/EET 2240  
Homework Problem #017

Express mesh equations in the matrix form discussed in class.



$$I_1 = -3 \quad (\text{constraint})$$

$$I_3 = -15 \quad (\text{constraint})$$

$$5(I_2 - I_1) + 10(I_2 - I_3) = 0 \quad (\text{KVL for mesh 2})$$

In matrix form:

$$\begin{bmatrix} 1 & 0 & 0 \\ 0 & 0 & 1 \\ -5 & 15 & -10 \end{bmatrix} \begin{bmatrix} I_1 \\ I_2 \\ I_3 \end{bmatrix} = \begin{bmatrix} -3 \\ -15 \\ 0 \end{bmatrix}$$