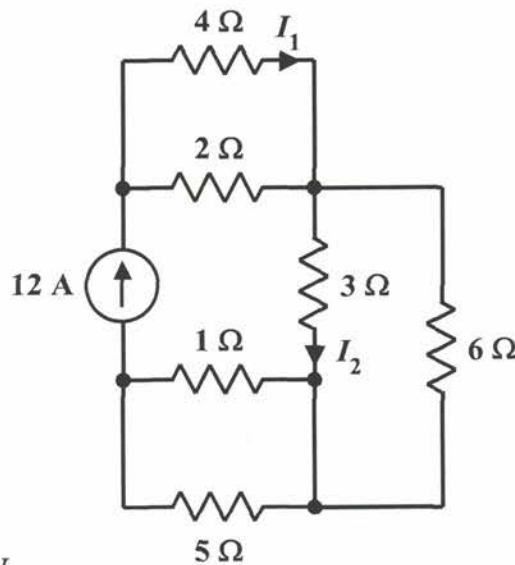


EE 2240  
Problem #01



- a. Determine the value of  $I_1$ .

The  $2\Omega$  and  $4\Omega$  resistors are in parallel with  $12A$  delivered to the pair.

$$I_1 = \frac{\frac{1}{4\Omega}}{\frac{1}{4\Omega} + \frac{1}{2\Omega}} \cdot 12A = 4A \quad \text{or} \quad I_1 = \frac{2\Omega}{4\Omega + 2\Omega} \cdot 12A = 4A$$

- b. Determine the value of  $I_2$ .

The  $3\Omega$  and  $6\Omega$  resistors are in parallel with  $12A$  delivered to the pair.

$$I_2 = \frac{\frac{1}{3\Omega}}{\frac{1}{3\Omega} + \frac{1}{6\Omega}} \cdot 12A = 8A \quad \text{or} \quad I_2 = \frac{6\Omega}{3\Omega + 6\Omega} \cdot 12A = 8A$$