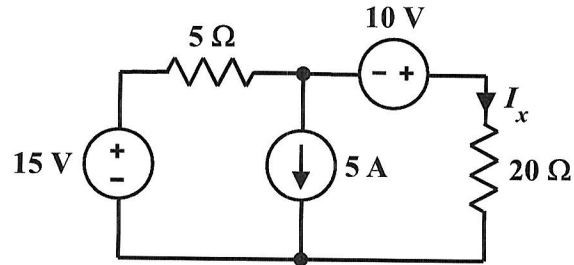
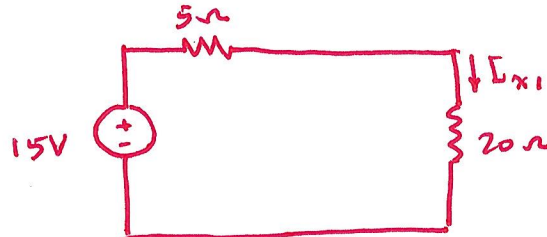


EE 2240
Homework Problem #034



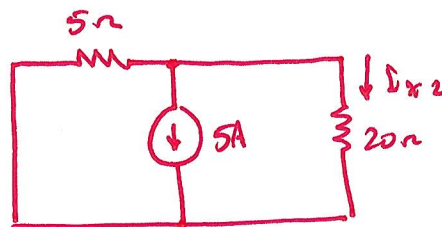
Use the superposition method to determine the value of I_x .

Circuit 1:



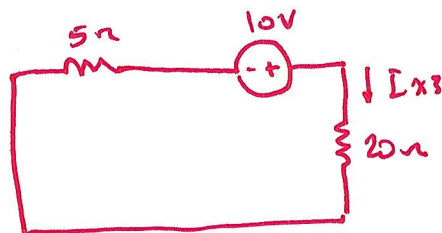
$$I_{x1} = \frac{15V}{5\Omega + 20\Omega} = 0.6A$$

Circuit 2:



$$I_{x2} = - \frac{5A \cdot 5\Omega}{5\Omega + 20\Omega} = -1A$$

Circuit 3:



$$I_{x3} = \frac{10V}{5\Omega + 20\Omega} = 0.4A$$

$$\begin{aligned} I_x &= I_{x1} + I_{x2} + I_{x3} \\ &= 0.6A - 1A + 0.4A \\ &= 0A \end{aligned}$$