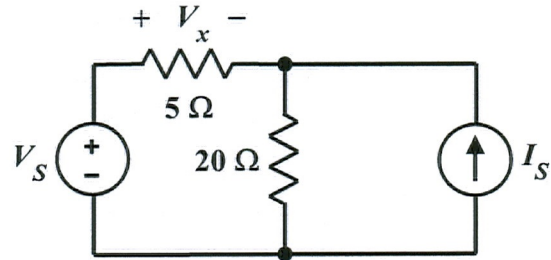


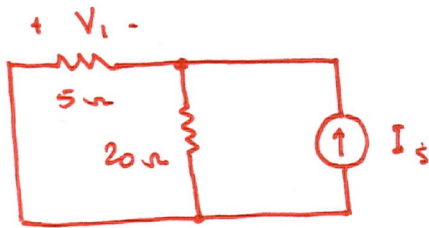
EE 2240  
**Homework Problem #20**



$V_x$  can be described by the equation

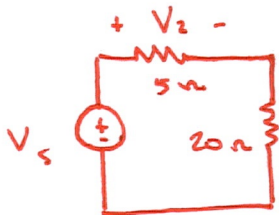
$$V_x = K_1 I_S + K_2 V_S$$

Determine  $K_1$  and  $K_2$ .



$$V_1 = - \frac{5\Omega \cdot 20\Omega}{5\Omega + 20\Omega} \cdot I_S = -4 I_S$$

$$\Rightarrow K_1 = -4$$



$$V_2 = \frac{5\Omega}{5\Omega + 20\Omega} \cdot V_S = \frac{1}{5} V_S$$

$$\Rightarrow K_2 = \frac{1}{5}$$