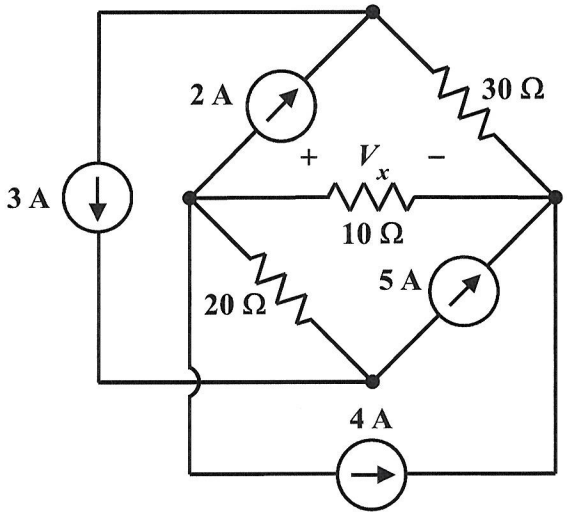
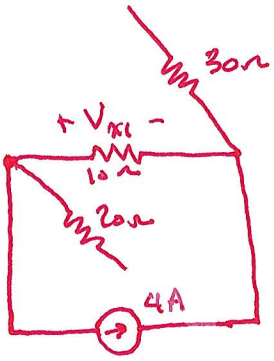
EE 2240

Homework Problem #035



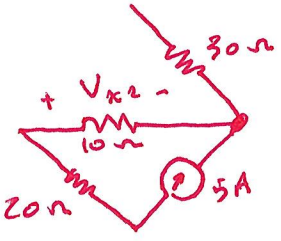
Use the superposition method to determine the value of V_x.

Circuit 1:



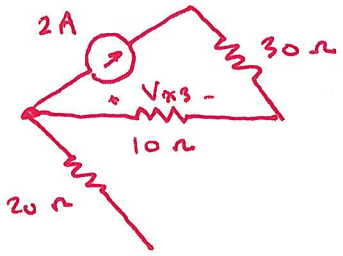
$V_{x1} = -(10\Omega)(4A) = -40V$

Circuit 2:



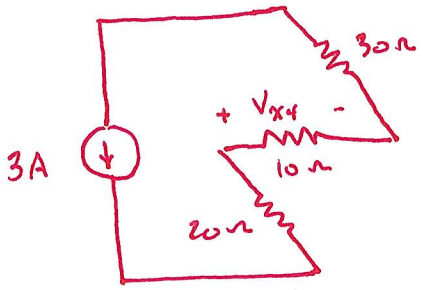
$V_{x2} = -(10\Omega)(5A) = -50V$

Circuit 3:



$$V_{x3} = -(10\Omega)(2A) = -20V$$

Circuit 4:



$$V_{x4} = (10\Omega)(3A) = 30V$$

Then $V_x = V_{x1} + V_{x2} + V_{x3} + V_{x4}$

$= -40V - 50V - 20V + 30V$

$= -80V$