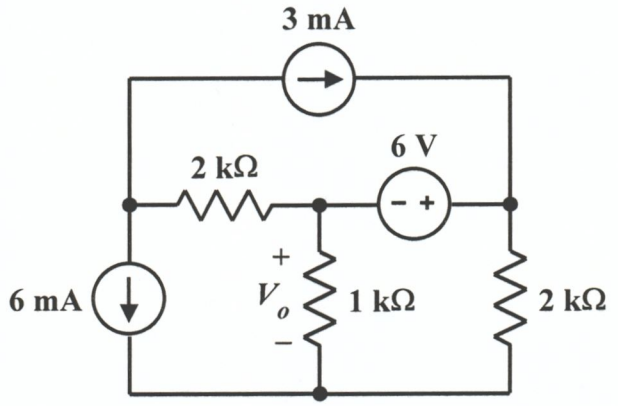
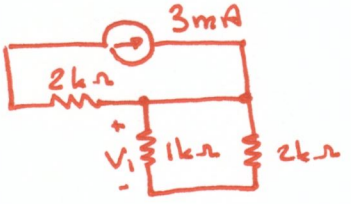
EE 2240

Problem #03

Find V_o using superposition. Show the details of your work.

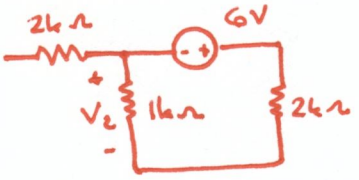


For the 3mA source:



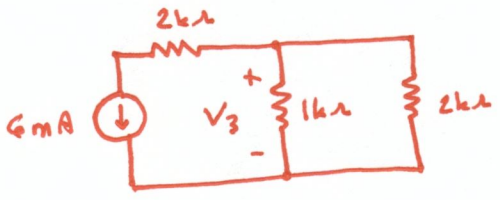
$V_1 = 0$

For the 6V source:



$$V_2 = -\frac{1k\Omega}{1k\Omega + 2k\Omega}(6V) = -2V$$

For the 6mA source:



$$V_3 = -\frac{(1k\Omega)(2k\Omega)}{1k\Omega + 2k\Omega}(6mA)$$

$$= -4V$$

$$V_o = V_1 + V_2 + V_3 = 0 - 2 - 4 = -6V$$