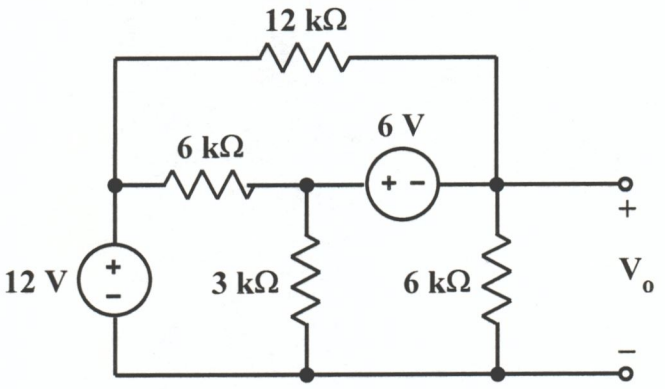
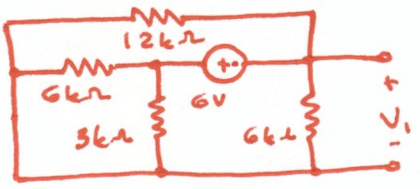
EE 2240

Problem #01

Use the superposition method to find V_o.



For the 6V source:

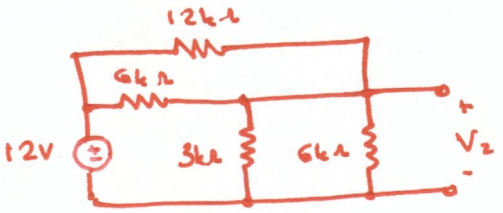


$6k\Omega \| 12k\Omega = 4k\Omega$

$3k\Omega \| 6k\Omega = 2k\Omega$

$V_1 = -\frac{4}{2+4} \cdot 6V = -4V$

For the 12V source:



$12k\Omega \| 6k\Omega = 4k\Omega$

$3k\Omega \| 6k\Omega = 2k\Omega$

$V_2 = \frac{2}{2+4} \cdot 12V = 4V$

$V_o = V_1 + V_2 = -4 + 4 = 0V$