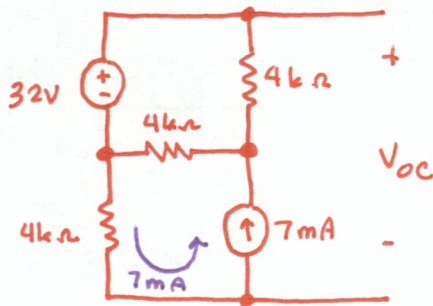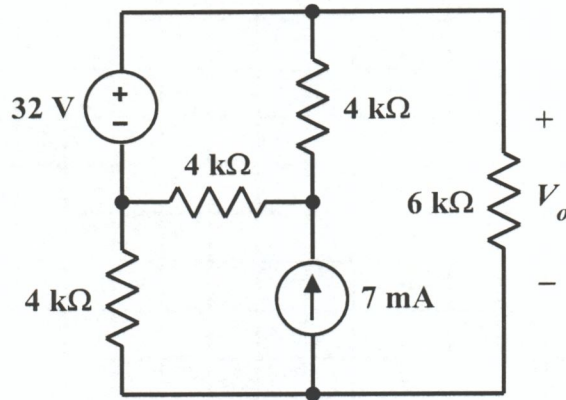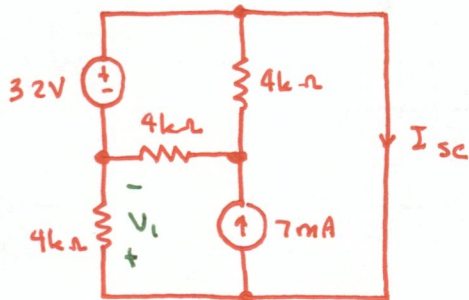# Problem #03

The 6kΩ resistor is the load for this circuit. Use the method described in class to find the Norton equivalent of the remainder of the circuit. (**Why not use source transformations?**) Then determine the value of V_o.

$V_{oc} = 32V + (4k\Omega)(7mA) = 60V$

$V_1 = 32V$

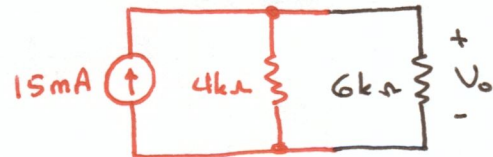$I_{sc} = 7mA + \dfrac{V_1}{4k\Omega}$

$= 7mA + \dfrac{32V}{4k\Omega}$

$= 15mA$

$I_N = I_{sc} = 15mA$

$R_N = \dfrac{V_{oc}}{I_{sc}} = \dfrac{60V}{15mA} = 4k\Omega$

$V_o = (15mA)\left(\dfrac{4k\Omega \cdot 6k\Omega}{4k\Omega + 6k\Omega}\right)$

$= 36V$