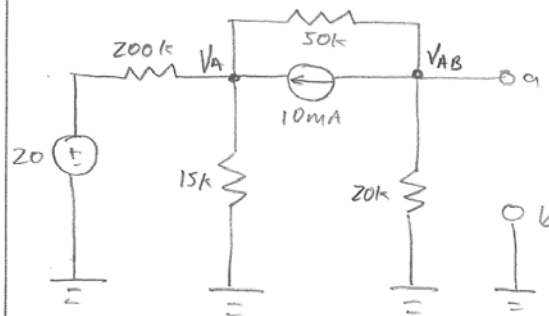


FIND THEVENIN EQUIVALENT

REMOVING $R_L = 10k$, AND USING NODAL ANALYSIS %



$$\text{NODE A: } \frac{V_A - 20}{200k} + \frac{V_A}{15k} + \frac{V_A - V_{AB}}{50k} = 10 \times 10^{-3} \quad [1]$$

$$\text{NODE AB: } \frac{V_{AB} - V_A}{50k} + \frac{V_{AB}}{20k} = -10 \times 10^{-3} \quad [2]$$

SOLVING WE GET

$$.000092V_A - .00002V_{AB} = .0101 \quad [1]$$

$$-.00002V_A + .00007V_{AB} = -.01 \quad [2]$$

$$V_{AB} = -118.874 \text{ V} = V_{TH}$$