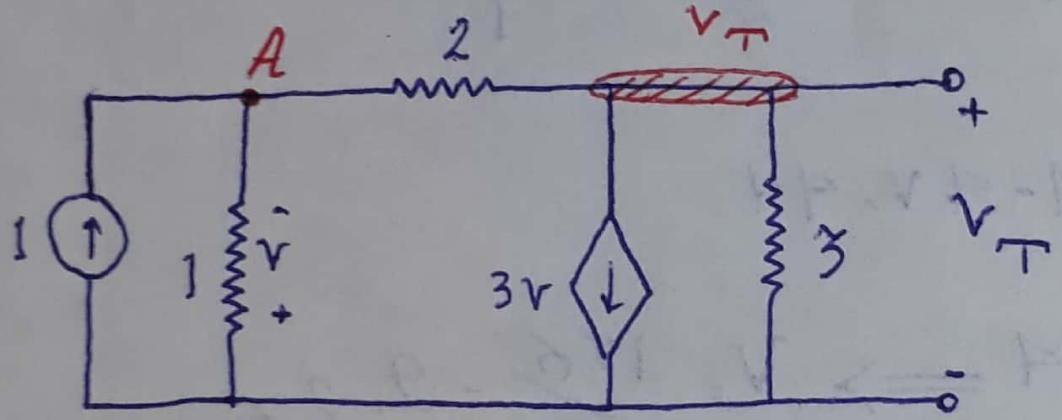
KVL @ 1: $-V_T + 2\left(-\frac{V_T}{3} - 3V + I_T\right) - V = 0$

$-V_T - \frac{2}{3}V_T - 6V + 2I_T - V = 0$

$-\frac{5}{3}V_T + 2I_T - 7\left(\frac{I_T}{2} - \frac{V_T}{6}\right) = 0$

$-\frac{V_T}{2} = \frac{3}{2}I_T \Longrightarrow R_{th} = -3$



KCL @ A: $-1 + V_A + \frac{V_A - V_T}{2} = 0$

KCL @ V_T: $\frac{V_T - V_A}{2} + 3V + \frac{V_T}{3} = 0$

$V_A = -V$

$$\left\{\begin{array}{l} -\frac{V_T}{2} - \frac{3}{2}V = 1 \\ \frac{5}{6}V_T + \frac{7}{2}V = 0 \end{array}\right\} \Longrightarrow V_T = -7 \qquad V = \frac{5}{3}$$