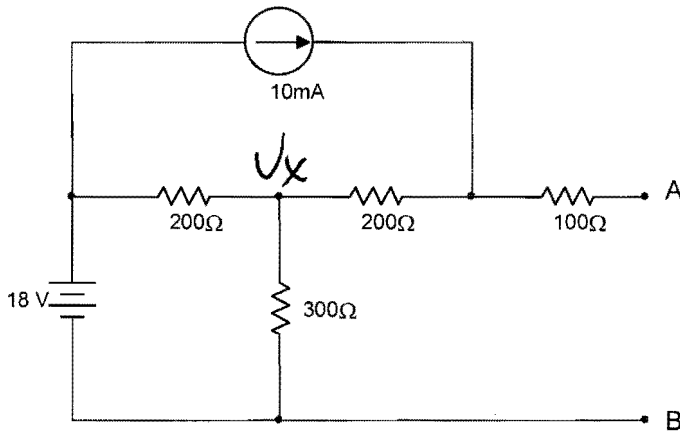
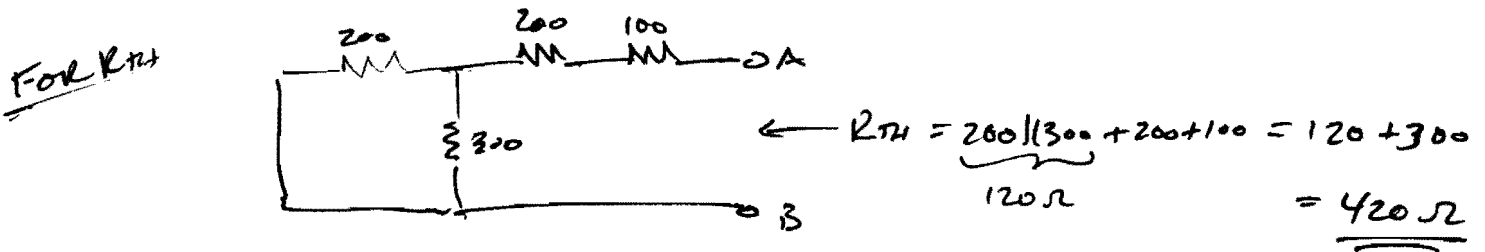


Answer the following questions for the circuit shown below.



1. Solve for and draw the Thevenin equivalent circuit as seen at terminals A-B.



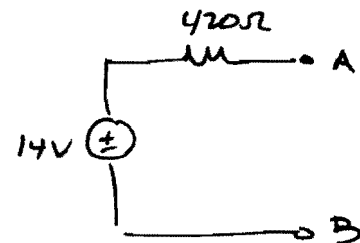
For V_{TH} TWO WAYS:
w/ KVL @ V_x :

$$\frac{V_x - 18}{200} + \frac{V_x}{300} = 10 \text{ mA} \Rightarrow V_x = 12 \text{ V}$$

$$V_{TH} = V_A = V_x + 10 \text{ mA}(200) = 12 + 2 = \underline{14 \text{ V}}$$

w/ SUPERPOSITION:

$$V_{TH} = V_A = 18 \cdot \frac{300}{300 + 200} + 10 \text{ mA}(200 + 120) = 10.8 + 3.2 = \underline{14 \text{ V}}$$



2. Determine the maximum power that can be delivered to a resistor placed between A-B.

$$P_{\text{max}} = \frac{V_{TH}^2}{4R_{TH}} = \frac{(14)^2}{4(420)} = \underline{\underline{0.117 \text{ W}}}$$