

$$; V_s = i_s R$$

áp //) hiệu ~~nối tiếp~~

$$P_{6V} = -vi = +$$

\Rightarrow Deliver by the circuit.

Open/Remove

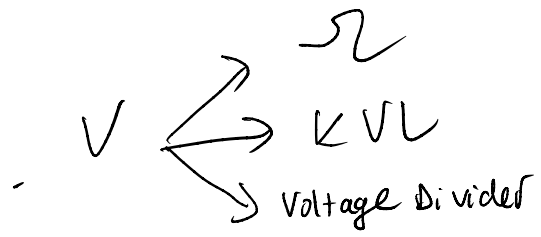
Short-circuit

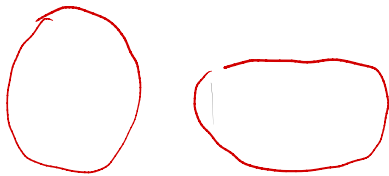
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Điện áp /







$$V = I \times \frac{R}{R_{\text{total}}}$$

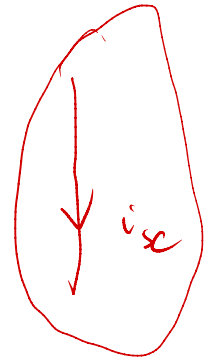
Terminals

$$V_{ab_{open}} = V_{th} ;$$



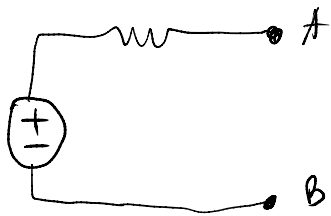
$$R_{\text{th}} = 8$$





short-circuit

1



$$V_{th} = -20i \times 25 \Omega = -500i$$

$$i = \frac{5 - 3V_{th}}{2000} \Rightarrow V_{th} = -500 \times \left(\frac{5 - 3V_{th}}{2000} \right)$$

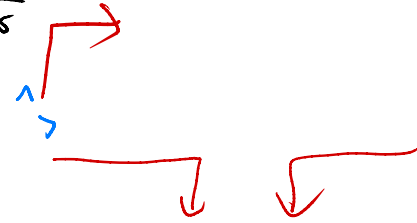
$$\Rightarrow V_{th} = -5V$$

$$V_{th} = V_{AB_{open}}$$

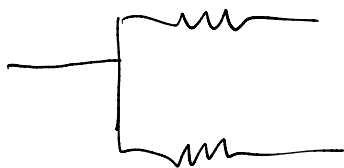
$$i_{sc} = -20i = -20 \times \frac{5}{2000} = -0.05(A)$$

$$\Rightarrow R_{th} =$$

$$V_1 = I_C \times \frac{5}{(12+8)+5}$$



$\leftarrow I_t$

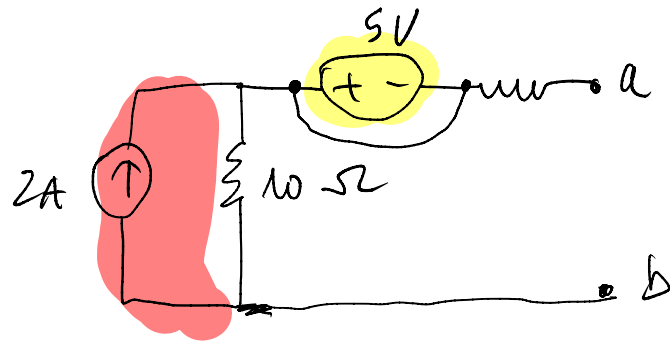


$$R_{eq} = 24 \Omega \Rightarrow v_1 = \frac{72}{2} = 36 \text{ V}$$

$$v_2 = v_1 \times \frac{5}{12 + 5 + 8} \Rightarrow V_{8\Omega} + V_{10\Omega} = V_{ab, \text{open}} = V_{th}$$

$$\Rightarrow V_{th} = 64.8 \text{ V}$$

$$\Rightarrow R_{th} = \frac{V_{th}}{I_{sc}} = \frac{64.8}{10.8} = 6 \Omega$$



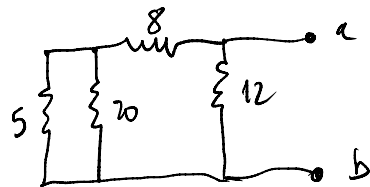
$$R_{th} = 12 \Omega$$

$$R_{th} = \frac{V_{Ath}}{i_{sc}}$$

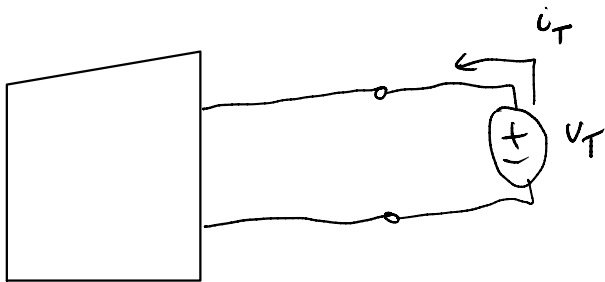
R_{th} ← Source transformation
Source deactivated

Only apply for independent source.

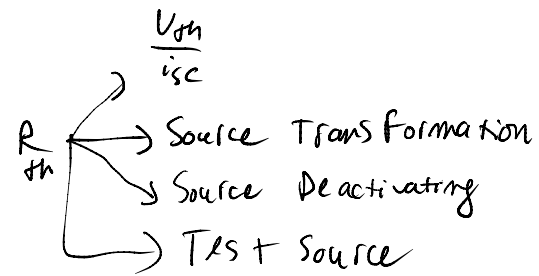




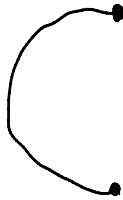
$$R_{ab} = R_{th}$$



$$R_{th} = \frac{V_T}{i_T}$$



Short-circuit



$$\begin{aligned}\dot{C}_T &= \frac{V_T}{25} + 20i \\ &= \frac{V_T}{25} - 20 \times \frac{40}{2000} = \frac{V_T}{25} - \frac{4V_T}{200} (=)\end{aligned}$$

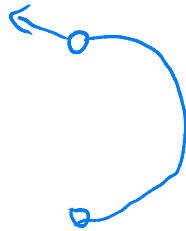
short-circuit
 $\Rightarrow V=0$



open: ngắt tải?
 $\Rightarrow i=0$



Short-circuit



X → open





