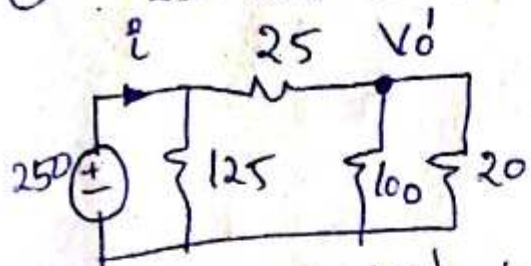


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**Answer**

① 250 source is an active



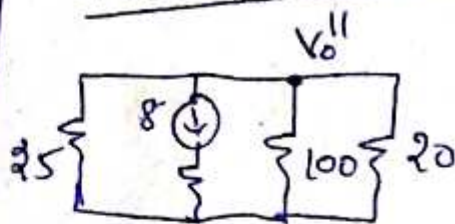
Apply KCL at  $V_o'$  node

$$\frac{V_o'}{100} + \frac{V_o'}{20} + \frac{V_o' - 250}{25} = 0$$

$$V_o' \left[ \frac{1}{100} + \frac{1}{20} + \frac{1}{25} \right] = 10$$

$$\boxed{V_o' = 100 \text{ V}}$$

8A source is active



Apply KCL

$$\frac{V_o''}{25} + \frac{V_o''}{100} + \frac{V_o''}{20} = -8$$

$$V_o'' \left[ \frac{1}{25} + \frac{1}{100} + \frac{1}{20} \right] = -8$$

$$\boxed{V_o'' = -80 \text{ V}}$$

$$V_o = V_o' + V_o''$$

$$\boxed{V_o = 100 - 80 = 20 \text{ V}}$$

② power developed by 8A source is  
 $= 8 \times 60 = 480 \text{ W}$

$$\begin{aligned} \textcircled{1} \quad i &= \frac{250}{125} + \frac{250 - 20}{25} \\ &= 2 + 9.2 = 11.2 \text{ A} \end{aligned}$$

power developed at 250 source  
 $= 250 \times 11.2$

$$= 2800 \text{ W.}$$

Likes: 1

Dislikes: 0

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