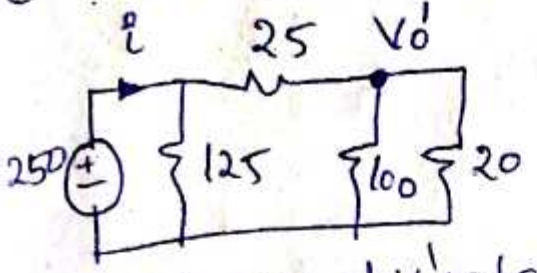
Answer

① 250 source is an active



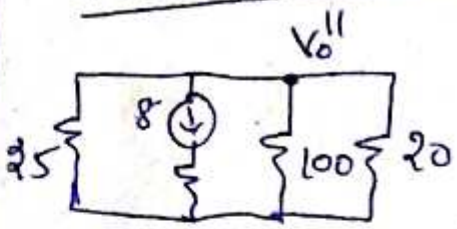
Apply KCL at V_o' node

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

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

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

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

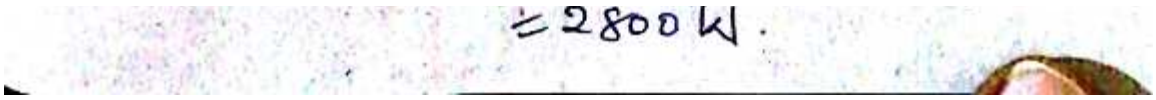
$$= 8 \times 60 = 480\text{W}.$$

① $$i = \frac{250}{125} + \frac{250 - 20}{25}$$

$$= 2 + 9.2 = 11.2\text{A}$$

power developed at 250 source

$$= 250 \times 11.2$$



Likes: 1 **Dislikes: 0**