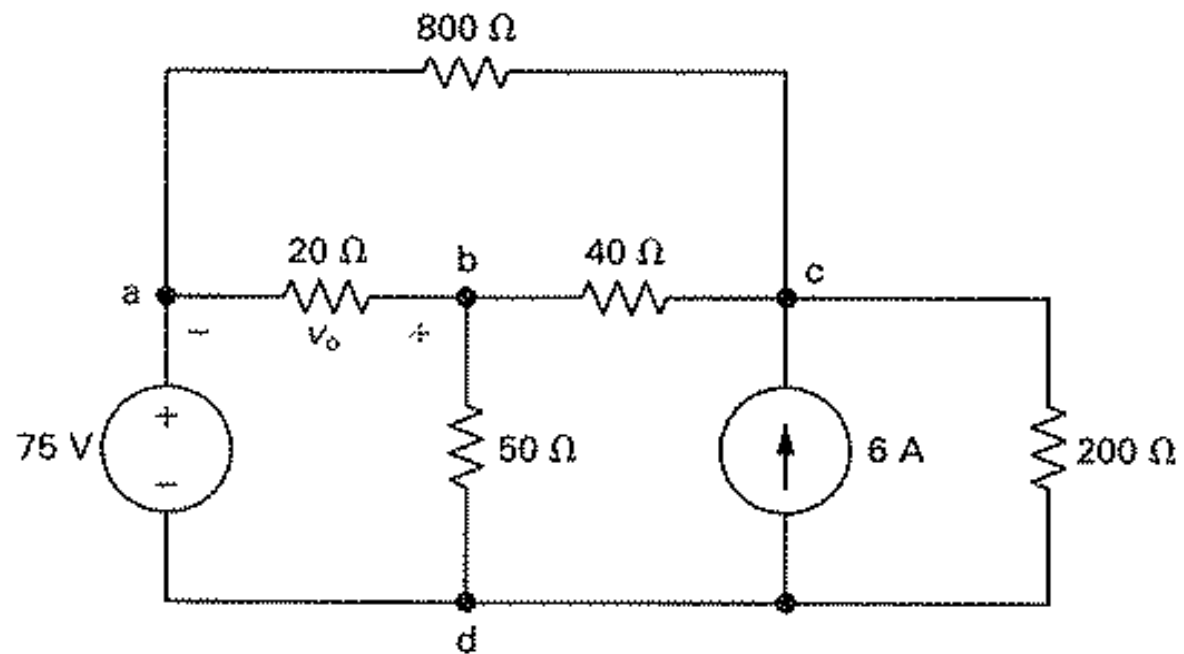
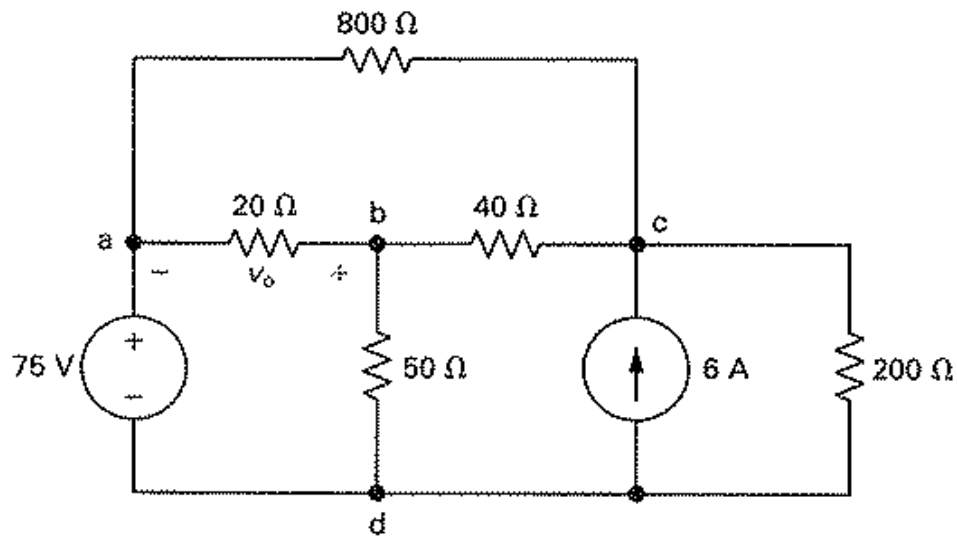


# Node 6

examples

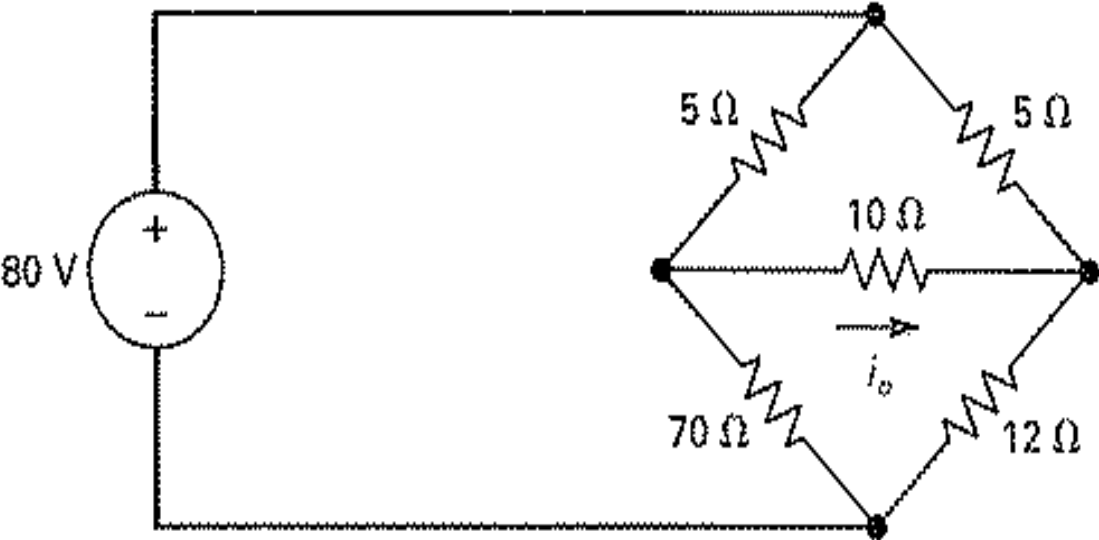
**Example:** find  $v_o$

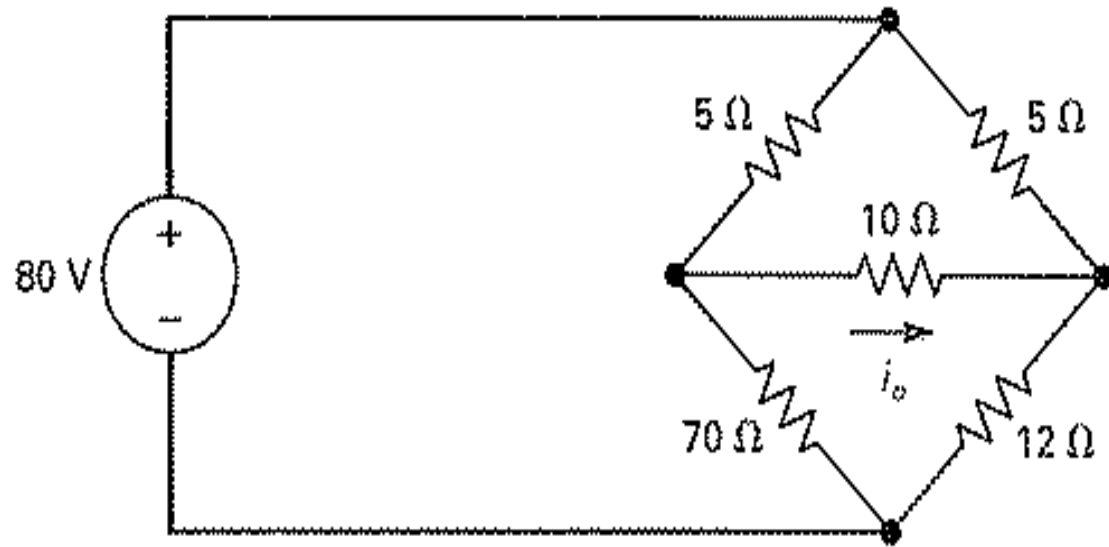




$$v_o = 40 \text{ V}$$

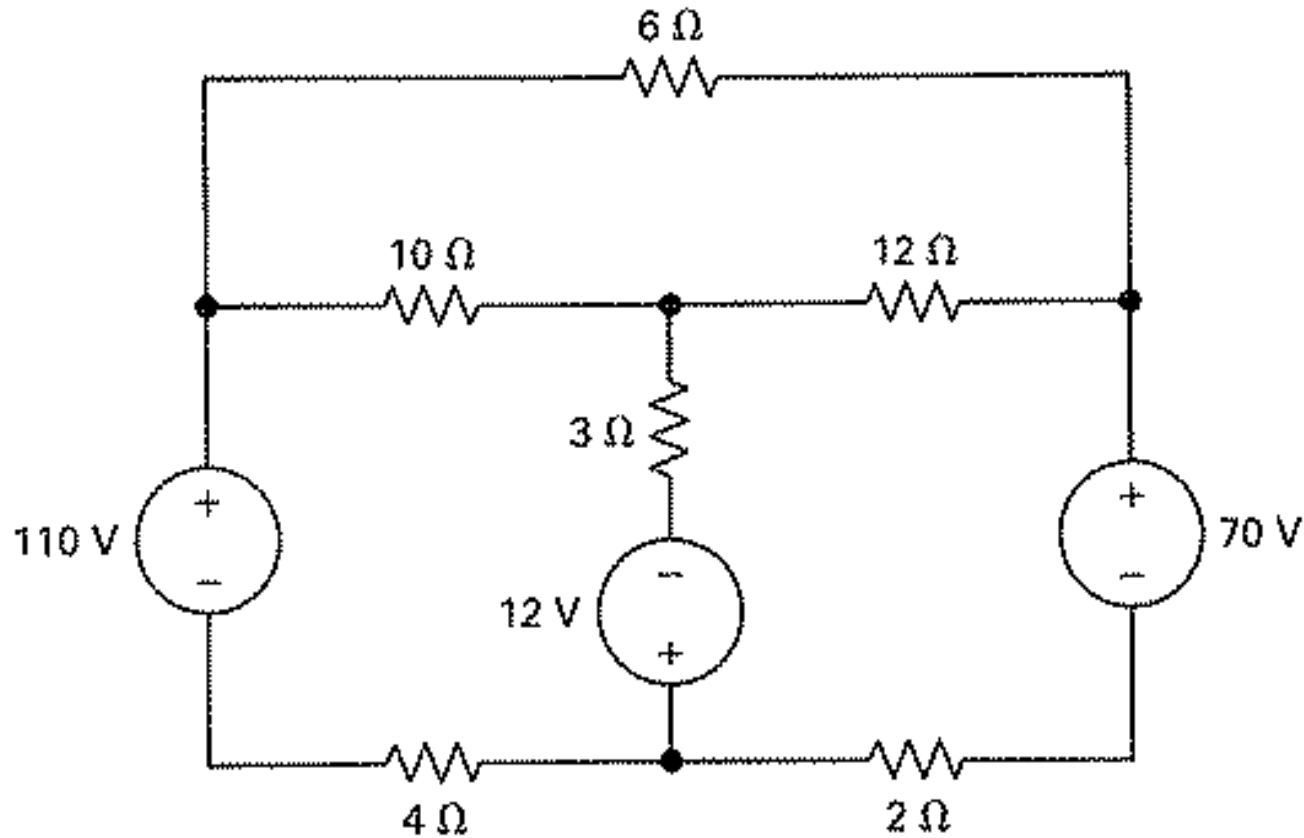
**Example:** find  $i_0$

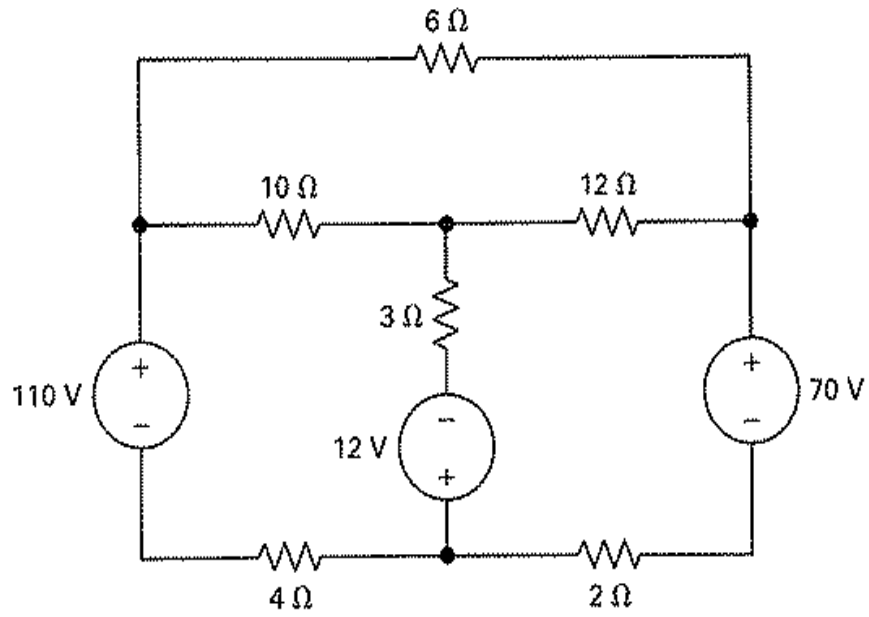




$$i_o = 1 \text{ A}$$

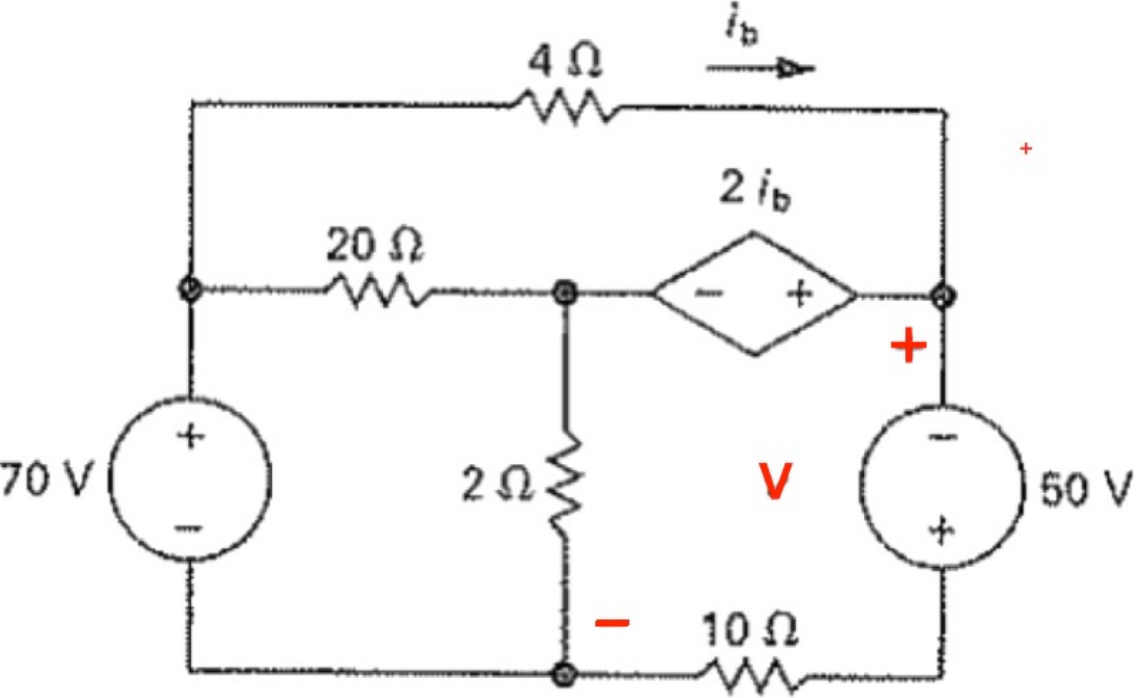
**Example:** find the power of the  $10\ \Omega$  resistor



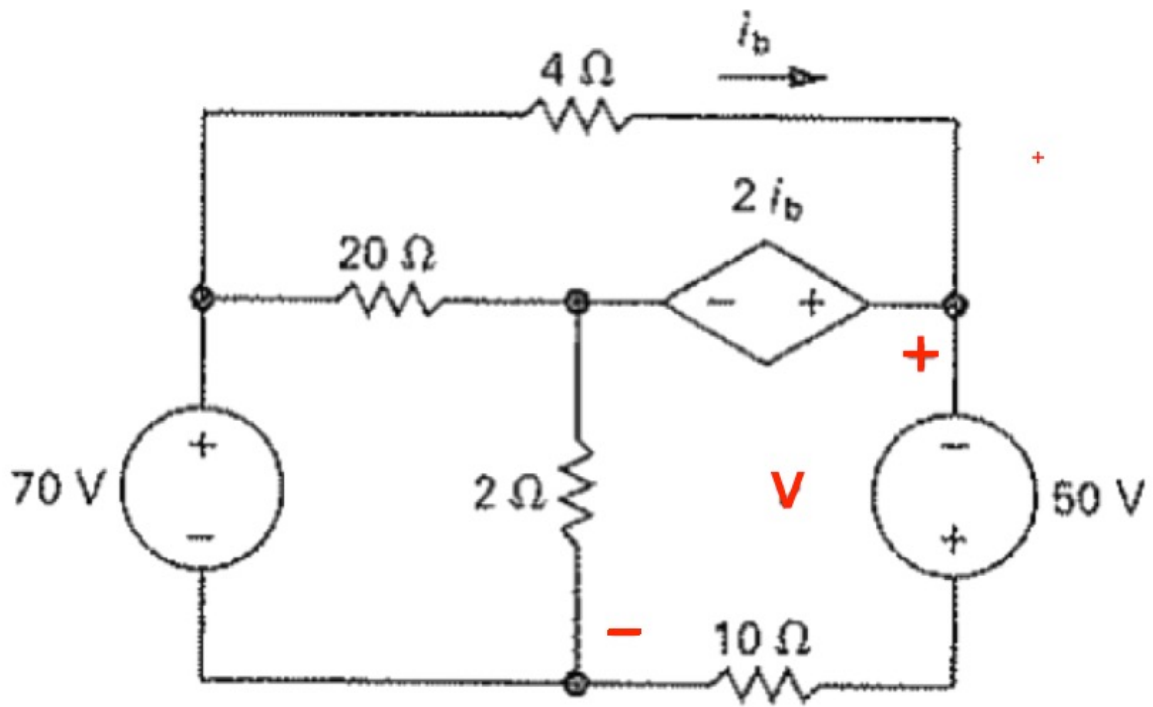


$$P = 360 \text{ W}$$

**Example:** find  $v$

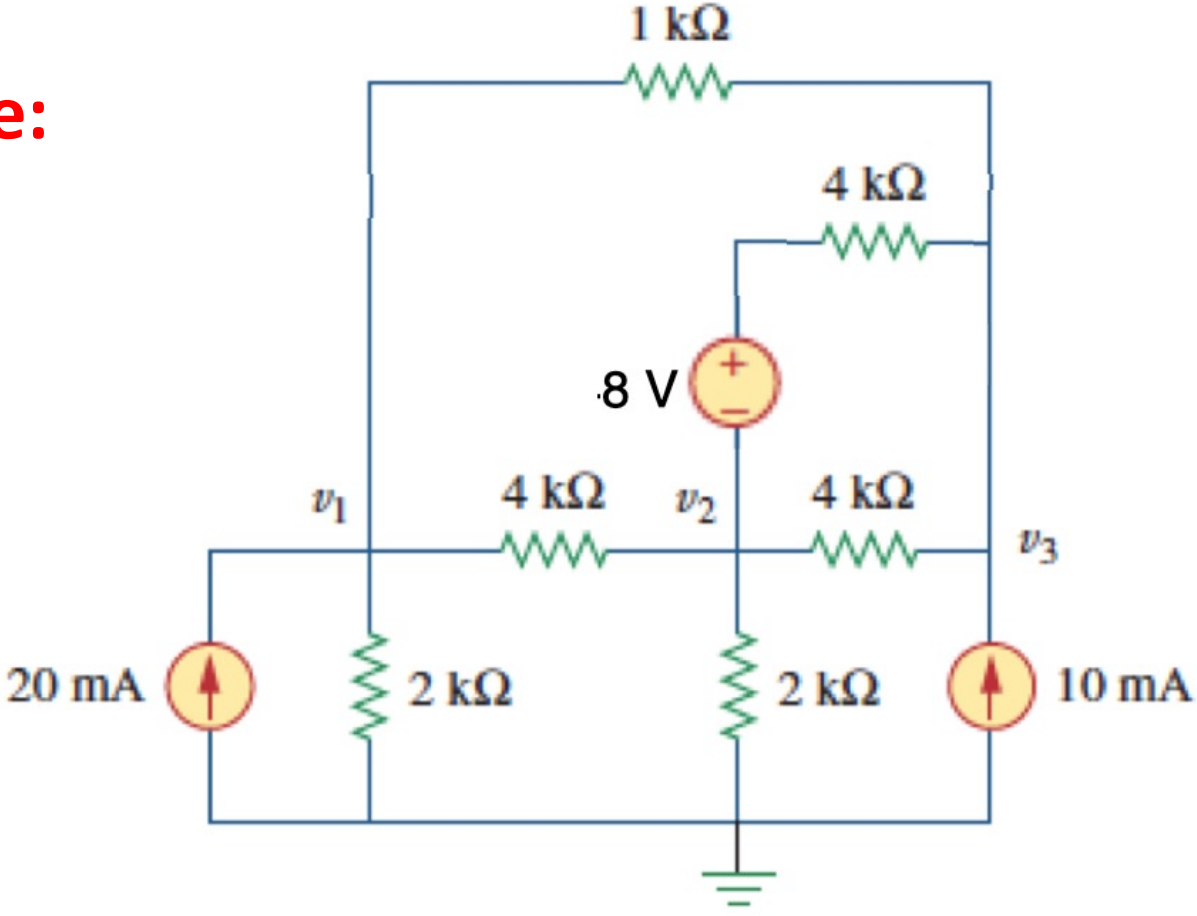


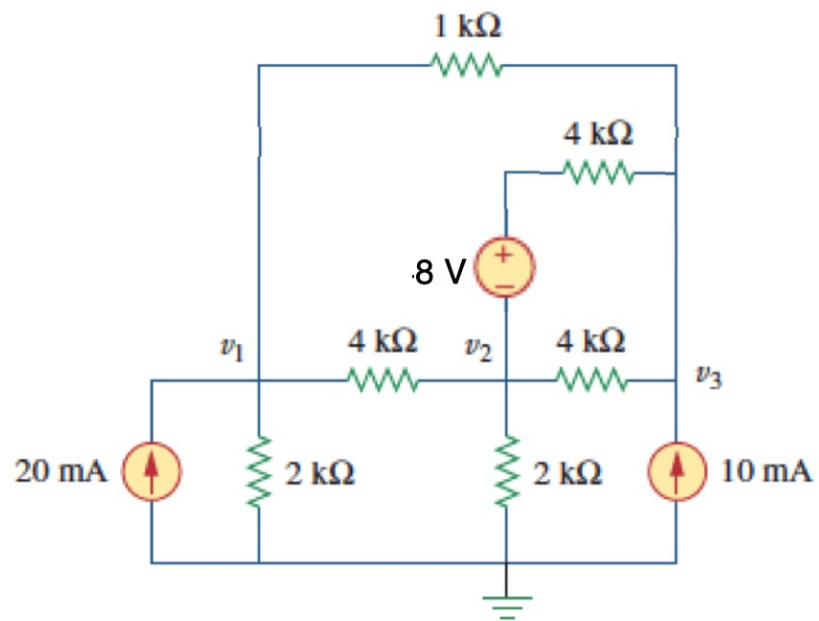




$$v = 30\text{ V}$$

Example:





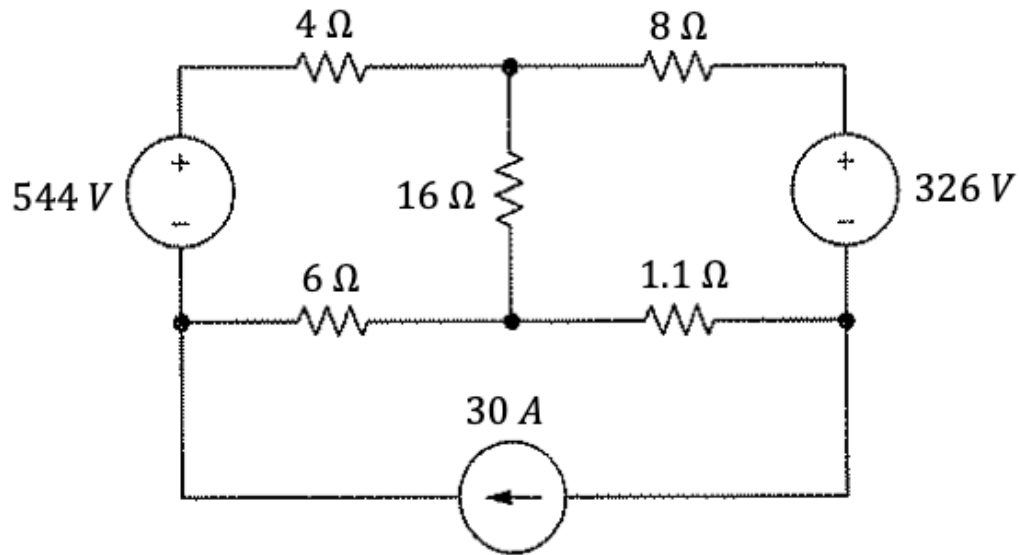
$$v_1 = 37.8 \text{ V}$$

$$v_2 = 22.2 \text{ V}$$

$$v_3 = 40.6 \text{ V}$$

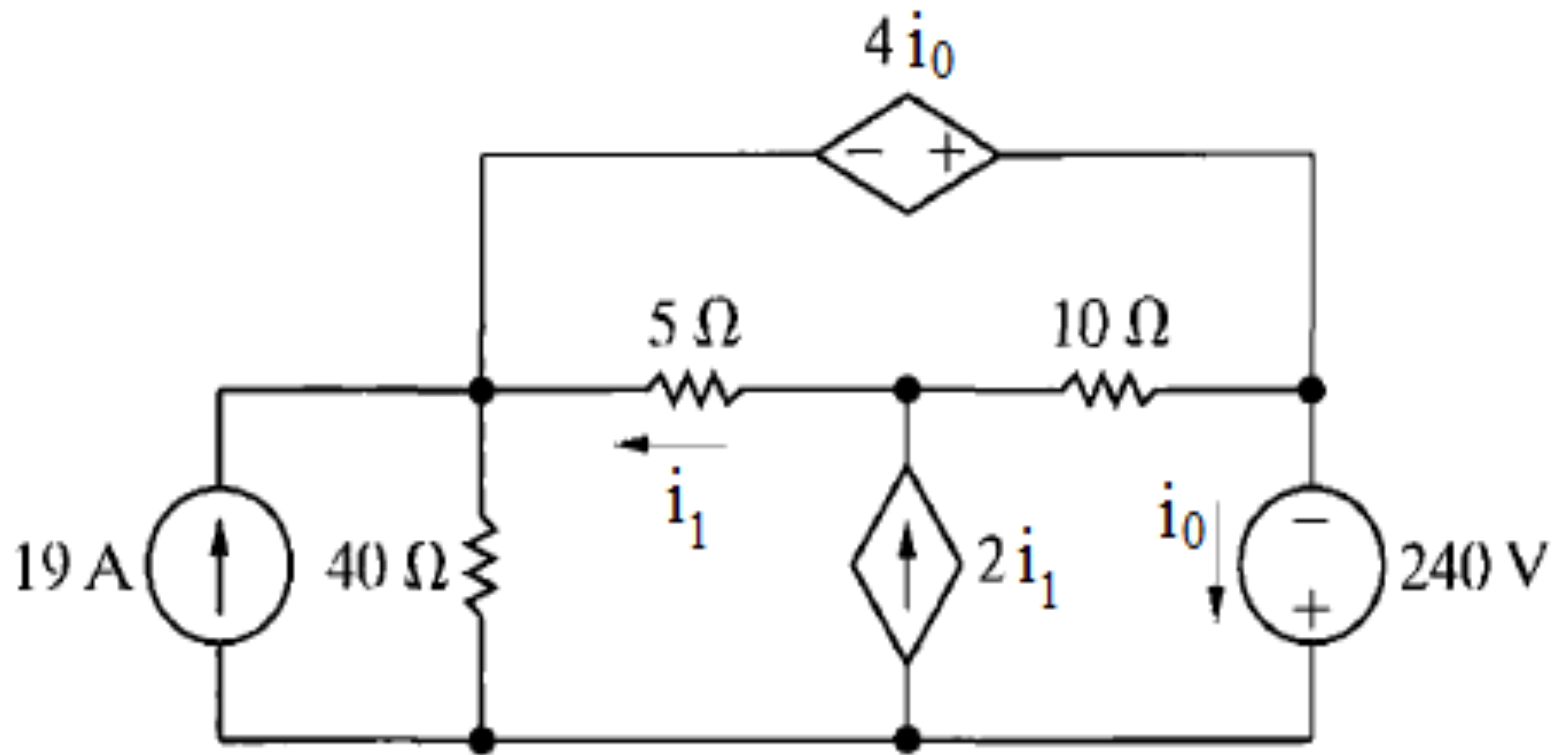
60 W

**Practice problem:** find the power of the current source



$$i_0 = 10 \text{ A}$$
$$i_1 = -8 \text{ A}$$

**Practice problem:** find  $i_0$  and  $i_1$



**Practice problem:** The variable voltage source shown in the circuit below (the source with the diagonal line through it) is adjusted so that the power absorbed by the  $5\ \Omega$  resistor is 5 watts. Find the value of  $v_{DC}$ .

