

Attribution Nidhal Abdulaziz

Lecture 2 additional solutions

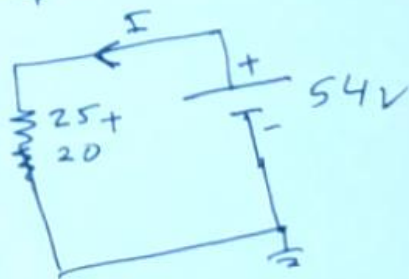
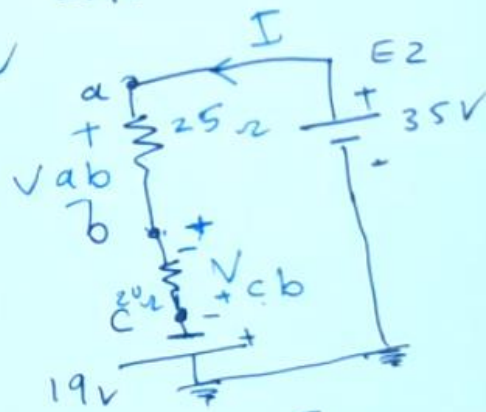
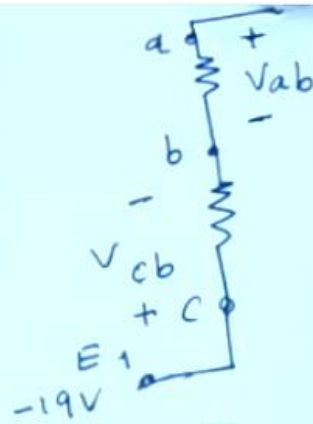
Lecture 2

$$I = \frac{54}{20+25} = 1.2 \text{ A}$$

$$V_{ab} = 25 \Omega \times 1.2 \text{ A} = 30 \text{ V}$$

$$V_{cb} = -1.2 \text{ A} \times 20 \Omega$$

$$V_{cb} = -24 \text{ V}$$



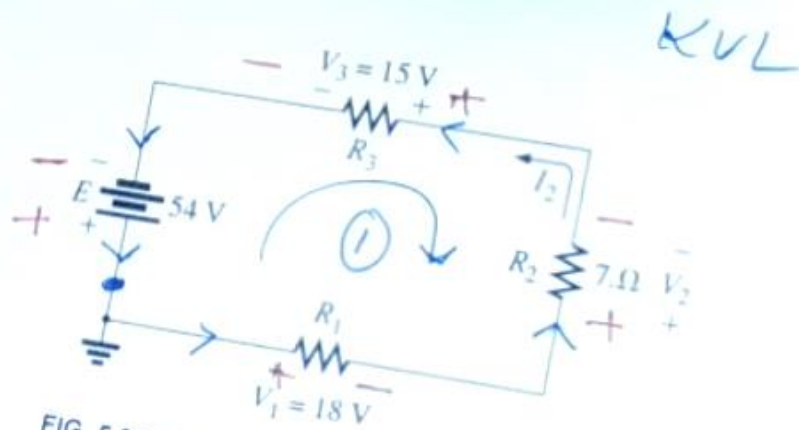


FIG. 5.32 Series configuration to be examined in Example 5.13.

KVL (1)

$$+E - V_3 - V_2 - V_1 = 0$$

$$54 - 15 - V_2 - 18 = 0$$

$$V_2 = 21 \text{ V}$$

$$I_3 = \frac{V_3}{R_3}$$

$$\Rightarrow I_3 = I_2 = I_1 = I_s$$

$$I_2 = \frac{V_2}{R_2}$$

$$I_1 = \frac{V_1}{R_1}$$

$$= \frac{21 \text{ V}}{7 \Omega} = 3 \text{ A}$$