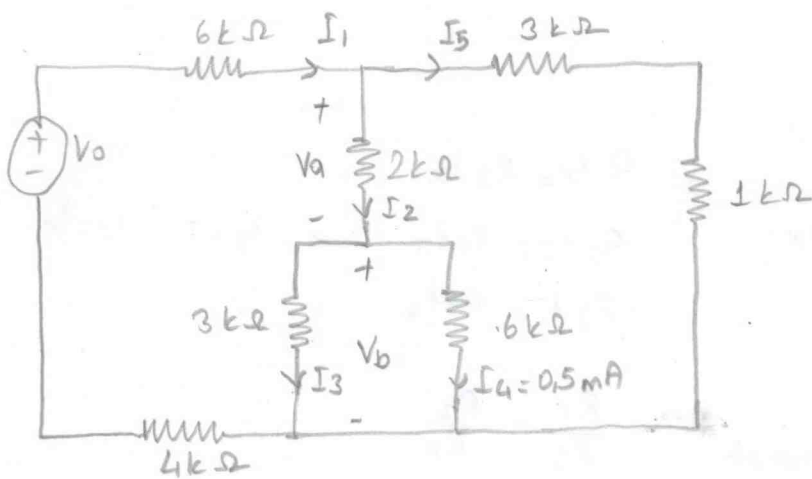


17)



$$V_b = 6 \cdot 10^3 \cdot I_4 = 6 \cdot 10^3 \cdot 0,5 \cdot 10^{-3} = 3 \text{ V}$$

$$I_3 = \frac{V_b}{3 \cdot 10^3} = 1 \text{ mA}$$

$$I_2 = I_3 + I_4$$

$$I_2 = 1,5 \text{ mA}$$

$$V_a = 2 \cdot 10^3 \cdot I_2 = 3 \text{ V}$$

$$V_a + V_b = 4 \cdot 10^3 I_5$$

$$6 = 4 \cdot 10^3 I_5$$

$$I_5 = 1,5 \text{ mA}$$

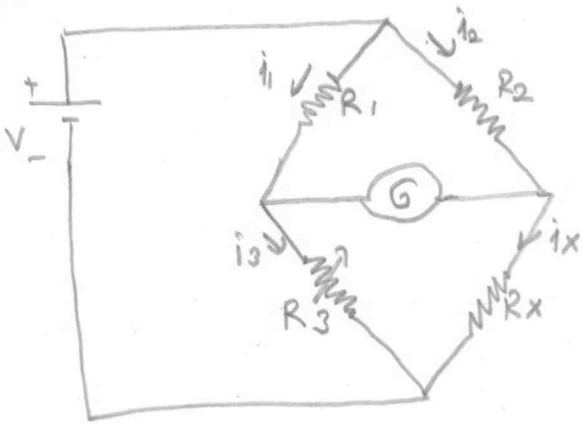
$$I_1 = I_2 + I_5 = 3 \text{ mA}$$

$$V_0 = 10 \cdot 10^3 I_1 + V_a + V_b$$

$$V_0 = 30 + 3 + 3 = 36 \text{ V} \quad (40)$$

$$P = -V I_1 = -36 \cdot 3 \cdot 10^{-3} = -108 \text{ mW} \quad (10)$$

2)



Galvanometreden akım geçmeyecek

şekilde R_3 değışken direncin

deęeri ayarlanır. Bilinmeyen

direncin deęeri $R_x = \frac{R_2 R_3}{R_1}$ eřitięinden

elde edilir.

$$R_1 i_1 = R_2 i_2$$

$$R_3 i_3 = R_x i_x \rightarrow i_3 = i_1, i_2 = i_x$$

$$R_3 i_1 = R_x i_2$$

$$\frac{R_1}{R_3} = \frac{R_2}{R_x}$$

$$R_1 R_x = R_2 R_3$$