



$$R_1 = R_2 = R_3 = 1\text{ k}\Omega$$

$$\varepsilon = 2\text{ V} \quad R_g = 1\ \Omega$$

$$I_g = 10^{-6}\text{ A}$$

$$1. \quad \varepsilon = I_2 R_3 + (I_2 + I_g) R_x$$

$$2. \quad \varepsilon = I_1 R_1 + (I_1 - I_g) R_2$$

$$3. \quad 0 = I_1 R_1 + I_g R_g - I_2 R_3$$

$$1. \quad 2 = I_2 10^3 + (I_2 + I_g) R_x$$

$$2. \quad 2 = I_1 10^3 + I_1 10^3 - I_g 10^3$$

$$3. \quad 0 = I_1 10^3 + I_g \cdot 1 - I_2 \cdot 10^3$$

Putrebunze $R_x(I_g)$ intru $\Delta R_x = |R_x(0) - R_x(10^{-6})|$

$$I_1 10^3 = 1 + I_g \frac{1}{2} 10^3$$

$$I_2 \cdot 10^3 = I_g + 1 + I_g \frac{1}{2} 10^3$$

$$2 = I_g (1 + \frac{1}{2} \cdot 10^3) + 1 + R_x (I_g + 10^{-3} + 10^{-3} I_g + \frac{1}{2} I_g)$$

$$R_x(I_g) = \frac{1 - 501 I_g}{1,501 I_g + 0,001}$$

$$R_x(0) = 1000\ \Omega$$

$$R_x(10^{-6}) \approx 998,001\ \Omega$$

$$\Delta R \approx 1,999\ \Omega$$