

Circuito 2:

$$V_{R1} = 4.23V$$

$$V_{R2} = 786mV$$

$$V_{R3} = 142mV$$

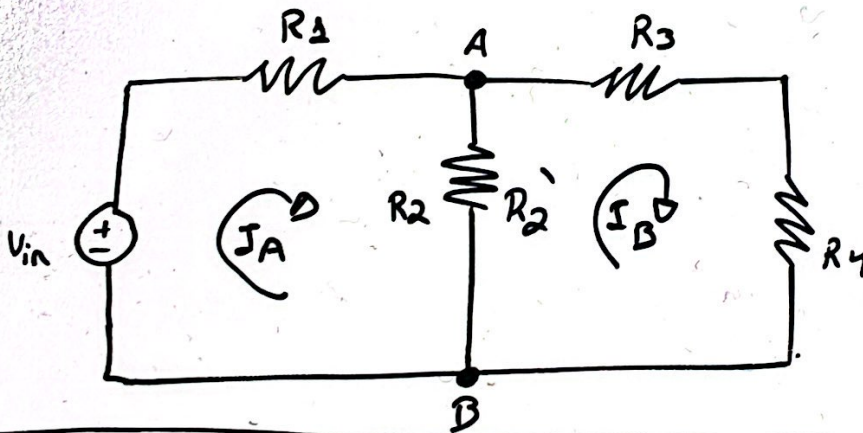
$$V_{R4} = 644mV$$

$$R_1 + R_2 - V_{in} = 0$$

$$4.23 + 0.786 - 5 = 0.004 = 0$$

↗ Malha da esquerda

RPQ:



↙ Malha da direita

$$V_{R3} = 14mV = 0.34V$$

$$V_{R4} = 644mV = 0.644V$$

$$V_{R3} + V_{R4} - V_{R2} = 0$$

$$0.342 + 0.644 - 0.786 = 0$$

$$I_{R1} = 4.23 \text{ mA}$$

$$I_{R2} = 3.57 \text{ mA}$$

$$I_{R3} = 644 \mu\text{A}$$

$$I_{R4} = 644 \mu\text{A}$$

Nº A:

$$I_{R1} = I_{R2} + I_{R3}$$

$$4.23 \text{ mA} = 3.57 \text{ mA} + 644 \mu\text{A}$$

$$4.23 \text{ mA} = 4.214 \text{ mA}$$

$$I_{R2} = I_{R1} - I_{R3} = 4.23 - 644 = 0.3566$$
$$= 3.566$$
$$= 3.57$$

Nº B:

$$I_{R2} = I_{R4} + I_{R3}$$

$$3.57 \text{ mA} = 0.644 \text{ mA} + 0.644 \text{ mA}$$

$$3.57 \text{ mA} = 1.288 \text{ mA}$$

$$I_{R4} = I_{R2} - I_{R3}$$

$$644 = 1.288 - 644$$

$$644 = 644$$

$$I_{R1} = I_{R2} + I_{R3} \rightarrow I_{R2} = I_{R1} - I_{R3}$$