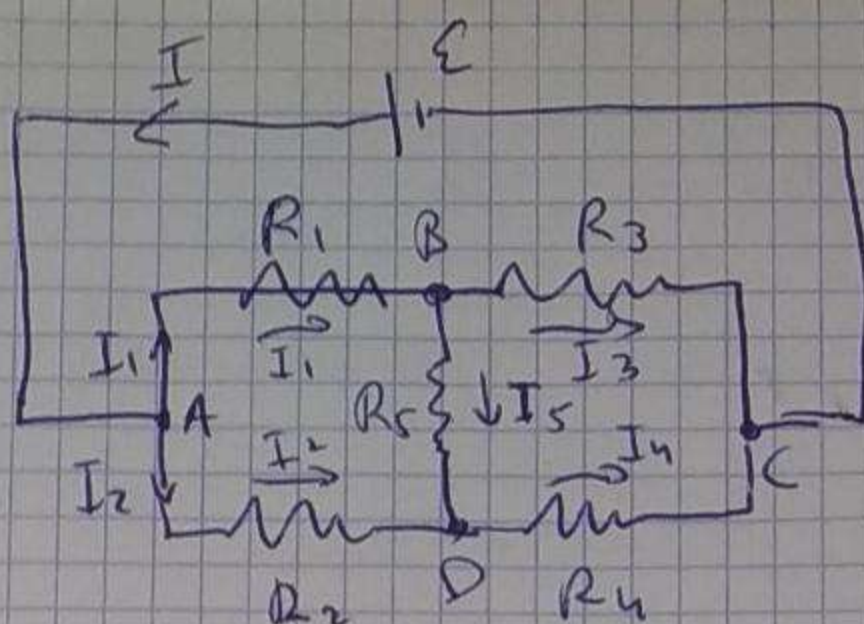③

Por Kirchoff: en B : $I_1 = I_3$ $(I_5 = 0)$
la legen da   en D : $I_2 = I_4$

$$Req = \left(\frac{1}{R_1 + R_3} + \frac{1}{R_2 + R_4} \right)^{-1} = \frac{(R_1 + R_3)(R_2 + R_4)}{R_1 + R_2 + R_3 + R_4}$$

$$\Rightarrow \varepsilon = I \cdot Req = (I_1 + I_2) \cdot \frac{(R_1 + R_3)(R_2 + R_4)}{R_1 + R_2 + R_3 + R_4}$$

$$V_{BD} = I_5 \cdot R_5 = I_1 (R_1) - I_2 (R_2) = 0$$

$$\uparrow$$
$$(0)$$

$$\Rightarrow \underbrace{I_1 R_1 = I_2 R_2}$$

$$(I_3)\downarrow \qquad (I_4)\downarrow$$

$$V_{BD} = 0 = I_1 R_3 - I_2 R_4 \Rightarrow I_1 R_3 = I_2 R_4 \Rightarrow \frac{I_2}{I_1} = \frac{R_3}{R_4}$$

$$\Rightarrow R_1 = \frac{I_2}{I_1} \cdot R_2 = \frac{R_3 \cdot R_2}{R_4}$$

$$\boxed{R_1 = \frac{R_3 \cdot R_2}{R_4}}$$