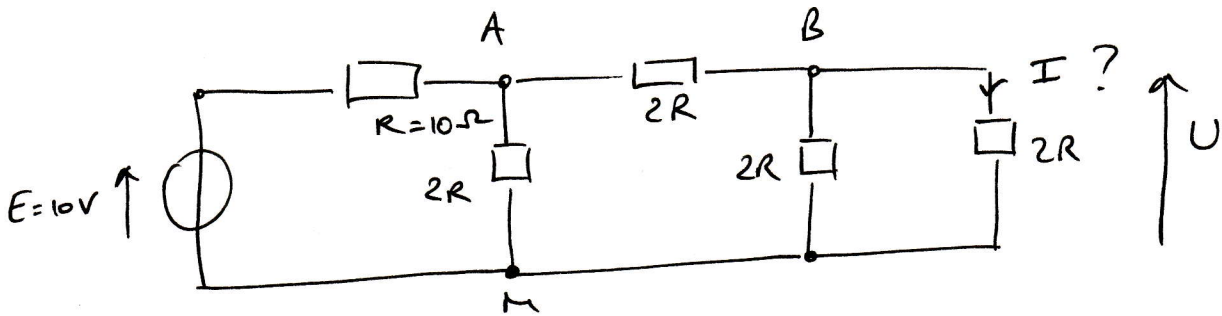
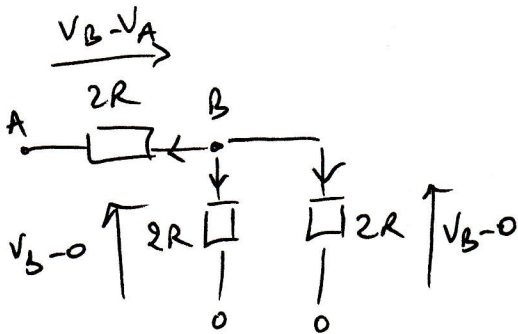


potentiel de noeud.

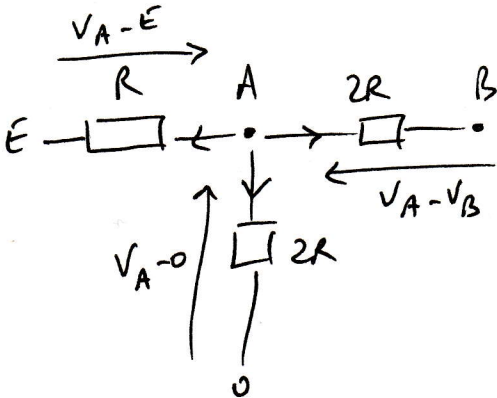


$$V_M = 0$$



$$\frac{V_B - V_A}{2R} + \frac{V_B - 0}{2R} + \frac{V_B - 0}{2R} = 0$$

$$3V_B = V_A$$



$$\frac{V_A - E}{R} + \frac{V_A - 0}{2R} + \frac{V_A - V_B}{2R} = 0$$

$$2V_A - 2E + V_A + V_A - V_B = 0$$

$$4V_A = 2E + V_B$$

$$\rightarrow 12V_B = 4V_A = 2E + V_B \quad \rightarrow \quad V_B = \frac{2}{11} E = \frac{20}{11} \text{ V}$$

$$V_B = 1,82 \text{ V}$$

$$V_A = 5,45 \text{ V}$$

$$I = \frac{1,82}{2 \times 10} = 91 \text{ mA}$$