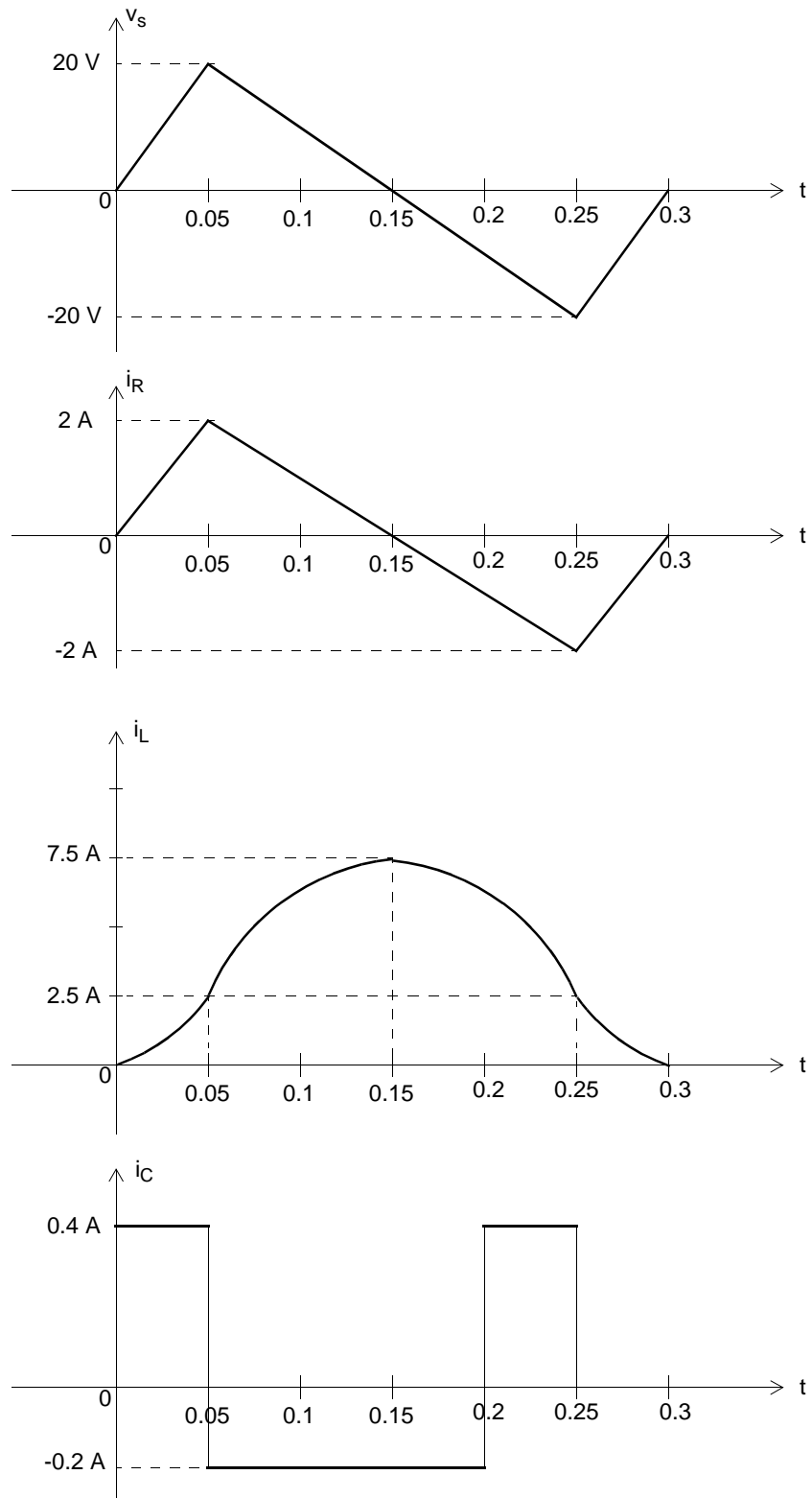
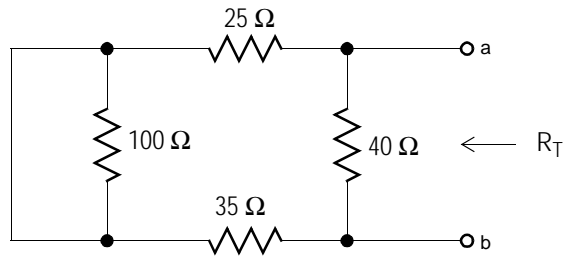
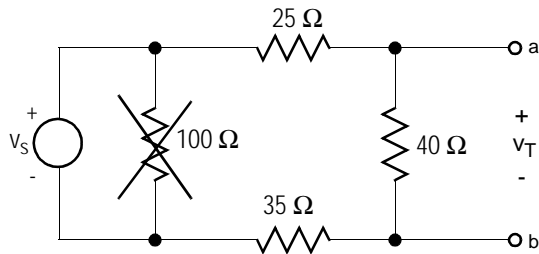


**Corrigé du test no. 1 A00****Question no. 1**

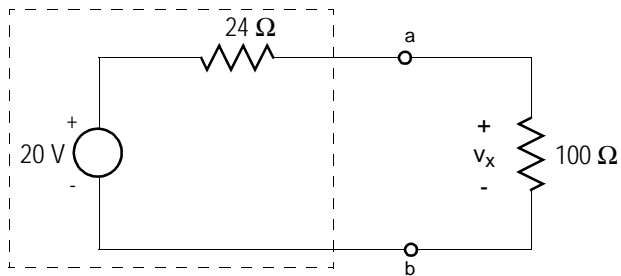
**Question no. 2**a) Calcul de  $R_T$ 

$$R_T = \frac{40 \times (25 + 35)}{40 + (25 + 35)} = 24 \Omega$$

Calcul de  $v_T$ 

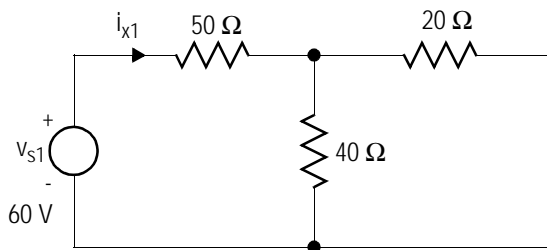
Diviseur de tension:

$$v_T = \frac{40}{40 + (25 + 35)} \times 50 = 20V$$

b) Calcul de  $v_x$ 

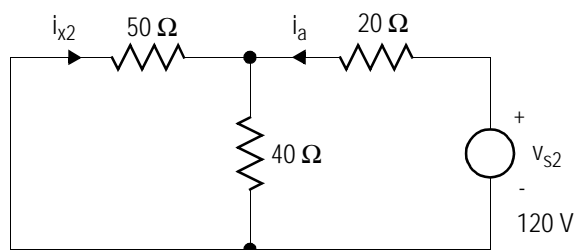
Diviseur de tension:

$$v_{Tx} = \frac{100}{100 + 24} \times 20 = 16.13V$$

**Question no. 3**a) On considère  $v_{s1}$  seulement:Le courant  $i_{x1}$  est égal à:

$$i_{x1} = \frac{60}{50 + \frac{40 \times 20}{40 + 20}} = 0.947A$$

b) On considère  $v_{s2}$  seulement:



Le courant  $i_a$  est égal à:

$$i_a = \frac{120}{20 + \frac{40 \times 50}{40 + 50}} = 2.842 \text{ A}$$

Le courant  $i_{x2}$  est calculé par la loi du diviseur de courant:

$$i_{x2} = \frac{-40}{40 + 50} \times i_a = \frac{-40}{40 + 50} \times 2.842 = -1.263 \text{ A}$$

c) Superposition des deux sources:

$$i_x = i_{x1} + i_{x2} = 0.947 - 1.263 = -0.316 \text{ A}$$