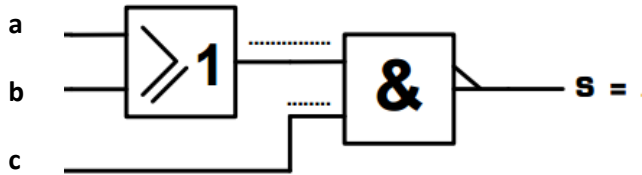


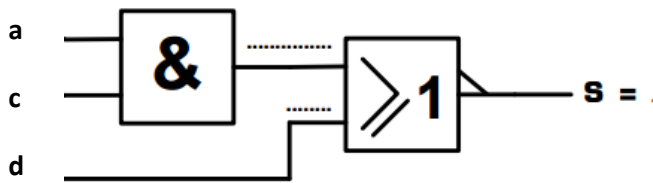


EXERCICE 1

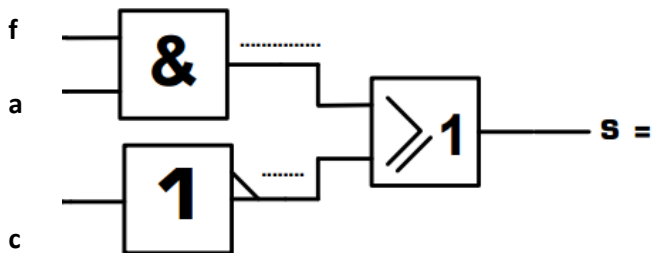
A partir du logigramme proposé, donner l'équation logique de la sortie S.



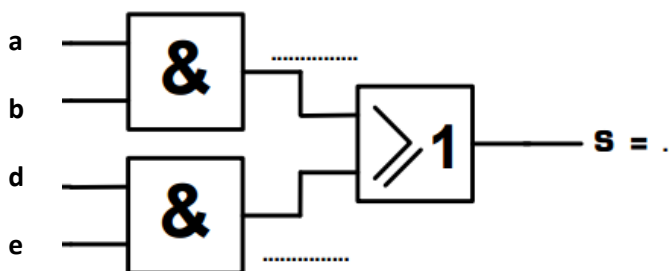
$$S = \bar{a}\bar{b} + c$$



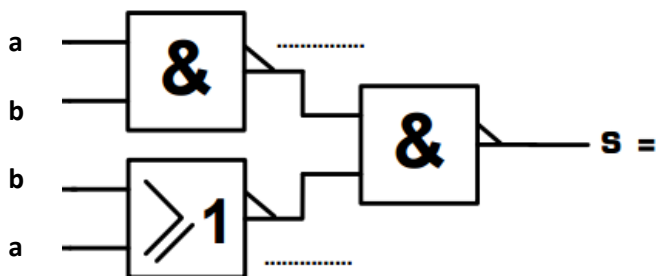
$$S = ac + d$$



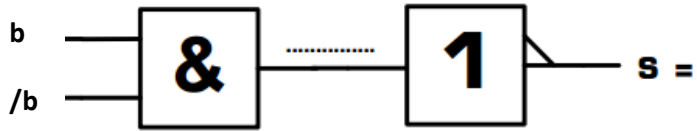
$$S = fa + \bar{c}$$



$$S = ab + de$$



$$S = ab + b + a$$



EXERCICE 2

A partir l'équation de A, B et C, donner le logigramme en portes hétérogènes.

$$A = (a + b) \cdot (\bar{c} \cdot \bar{d})$$

$$B = \overline{a \cdot b} + (c + d)$$

$$C = \bar{a}b + a\bar{b}$$

EXERCICE 3

A partir l'équation de D et E, donner le logigramme en portes homogènes NAND.

$$D = (a + b) \cdot \bar{c} \cdot d$$

$$F = a \cdot (\bar{c} + b) + d\bar{e}$$

EXERCICE 4

A partir l'équation de F et G, donner le logigramme en portes homogènes NOR.

$$F = (a + b) \cdot \bar{c} \cdot d$$

$$G = a \cdot (\bar{c} + b) + d\bar{e}$$