Série de exercícios de apoio para disciplina de circuitos lógicos

1) Montar a tabela da verdade das expressões abaixo:

a) $S = B \cdot (\overline{A} + C)$

b) $S = (A \cdot B) + (\overline{A} \cdot C)$

c) $S = \overline{C} \cdot \left[\overline{(A \cdot \overline{B}) + B \cdot (\overline{A} \cdot C)} \right]$

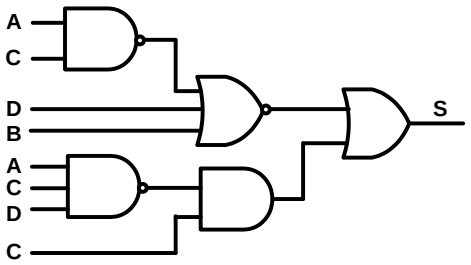
d) $S = (\overline{A} \cdot \overline{B}) + (A + B)$

e) $S = \left[\overline{\overline{(A \cdot C)} + (D + B)} \right] + \left[C \cdot \overline{(A \cdot C \cdot D)} \right]$

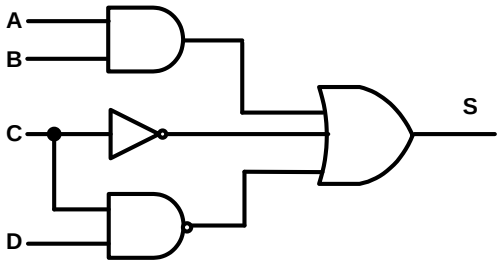
f) $S = \left[(\overline{A} + B) \cdot C \right] + \overline{D}$

2) Determinar as expressões booleanas e as tabelas da verdade dos circuitos lógicos abaixo:

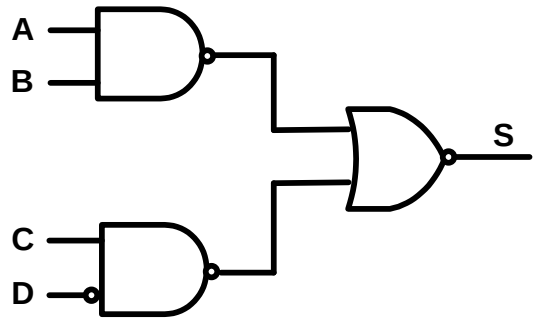
a)



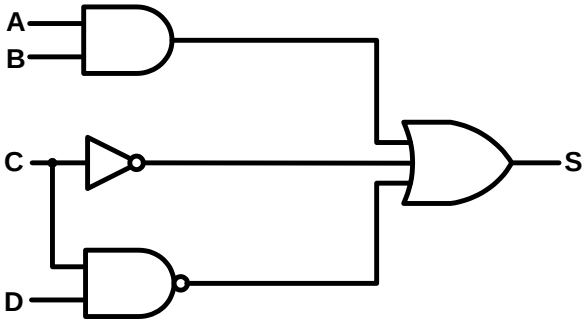
b)



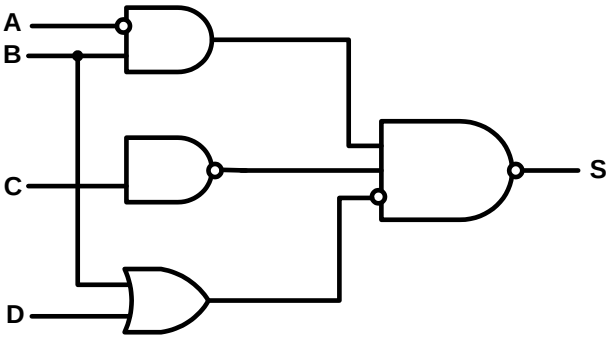
c)



d)



e)



3) Desenhe os circuitos que executam as expressões abaixo:

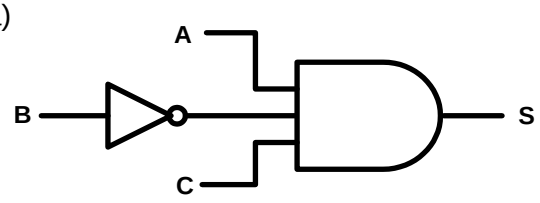
a) $S = \overline{\overline{(A \cdot B)} + \overline{(C \cdot D)}}$

b) $S = (A + \overline{B} + C) \cdot \overline{(A + C + \overline{D})}$

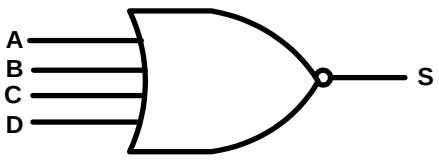
c) $S = \overline{(A + B)} \cdot C \cdot (A + C) \cdot \overline{B}$

Dados os circuitos lógicos a seguir, determine as expressões (equações) booleanas de saída:

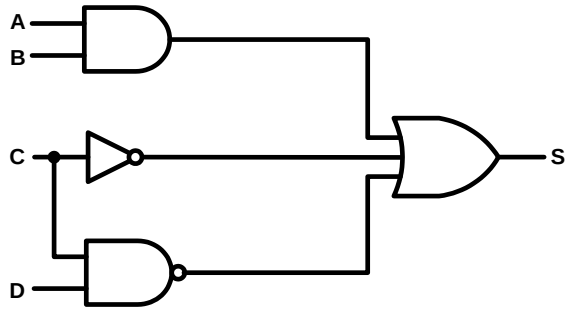
a)



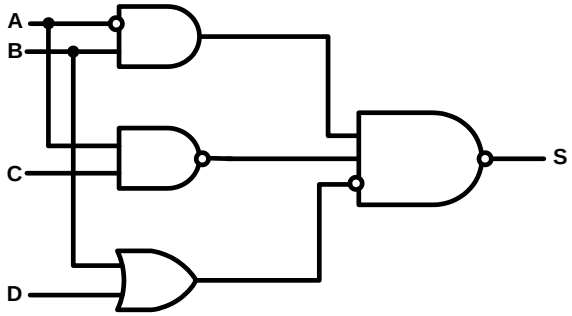
b)



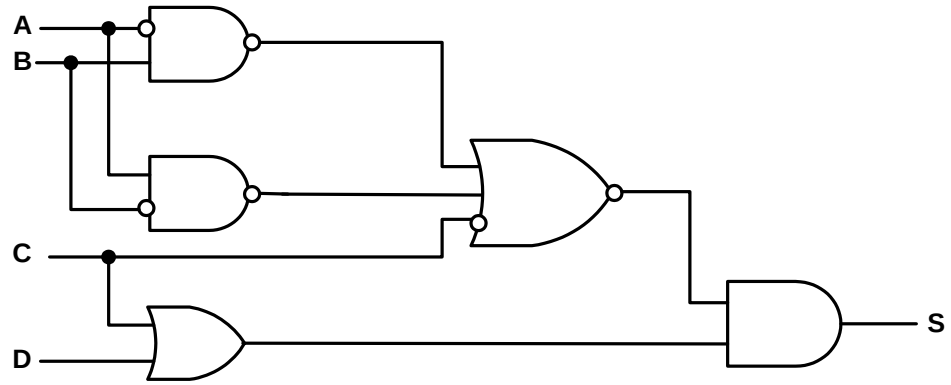
c)



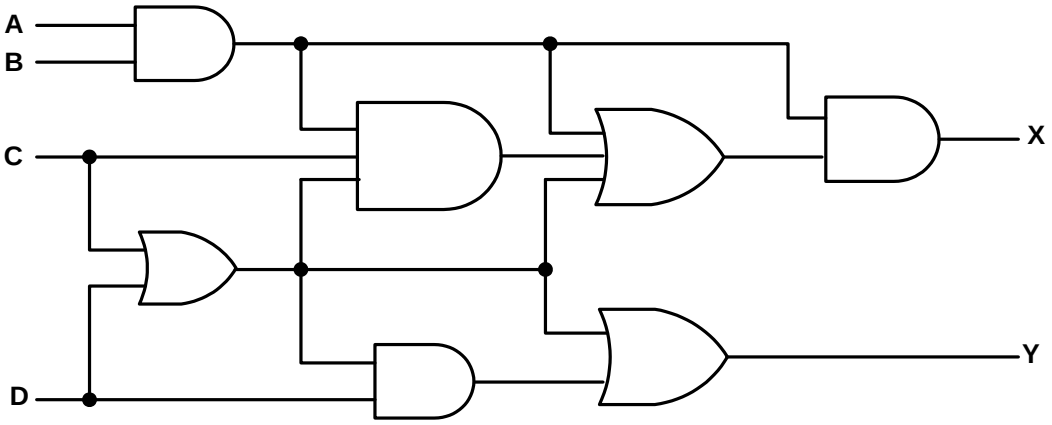
d)



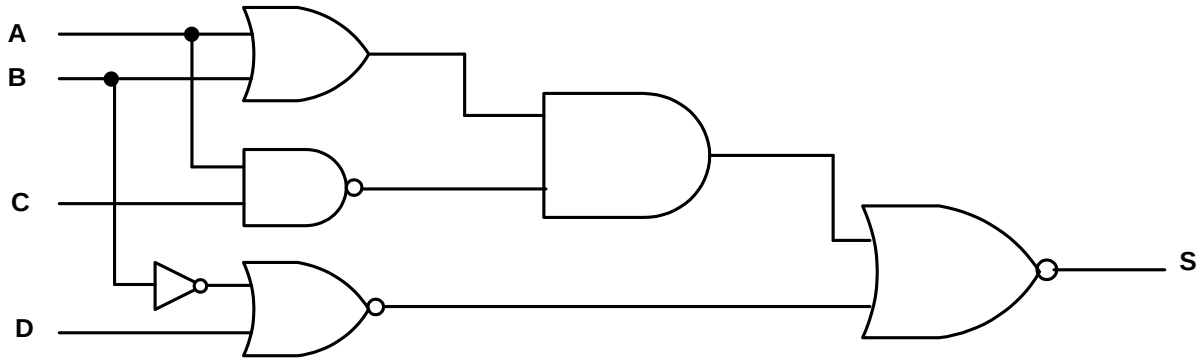
e)



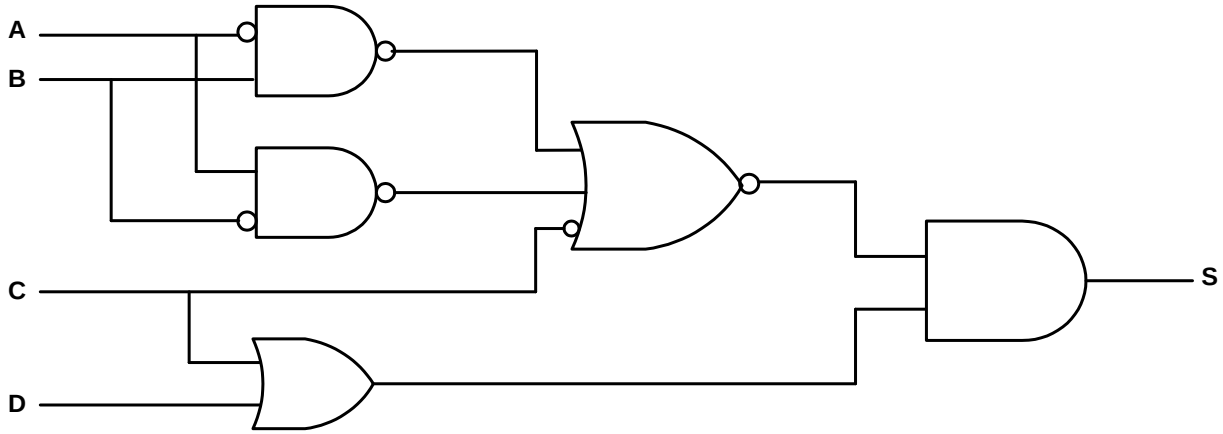
f)



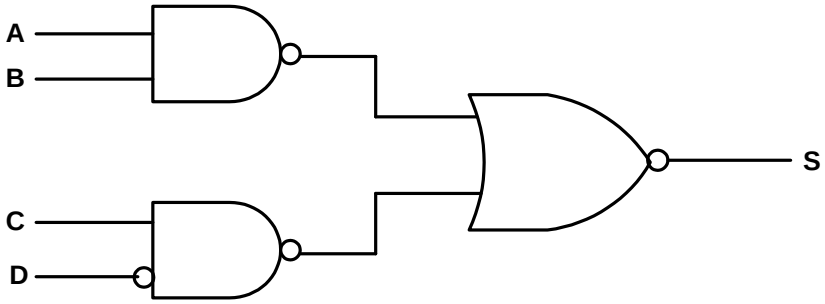
g)



h)



i)



j)