



1) Simplifique as expressões utilizando a álgebra de Boole:

a) $Z = (B + \bar{C})(\bar{B} + C) + (\overline{A + B + \bar{C}})$

b) $S = (B + \bar{C})(\bar{B} + C) + (\bar{A}.B.\bar{C})$

c) $P = (A + (\bar{B}.C))(\overline{D + B.E})$

d) $Q = (\overline{A.C + B + D}) + (C.(\overline{A.C.D}))$

e) $R = A.B.C + A.\bar{C} + A.\bar{B}$

f) $M = \bar{B}.\bar{D} + \bar{A} + A.\bar{B}.\bar{C}.D + A.\bar{B}.C.D + \bar{A}.\bar{C}$

g) $N = (\overline{A + B}) + (\overline{A.C}) + \bar{B}$

h) $L = \overline{\overline{\overline{A.B.C.D}} + \overline{\overline{\overline{A.B.C.D}}}}$

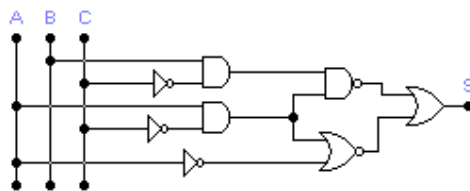
i) $X = \bar{A}.\bar{C} + \bar{A} + B.\bar{C}.\bar{A}.\bar{C} + \bar{A}.B$

j) $K = (\bar{A} + B).(A + B + D).\bar{D}$

k) $J = \bar{A}.\bar{B}.C.D + \bar{A}.\bar{B}.C.\bar{D} + A.\bar{B}.\bar{C}.\bar{D} + A.\bar{B}.C.\bar{D}$

2) Dado os circuitos mostrados abaixo obtenha a expressão, simplifique-as utilizando álgebra de Boole, obtenha a tabela verdade e o BDD da mesma.

a)



b)

