



Questão 1- a)

A	B	C	D	$X=A \cdot C'$	$Y=A'+B''$	$Z=A+B$	$H=(Y+D+Y)''$	$K=C''''Z)''$	$S=H+K$
0	0	0	0	1	0	0	0	1	1
0	0	0	1	1	0	0	0	1	1
0	0	1	0	1	0	0	0	1	1
0	0	1	1	1	0	0	0	1	1
0	1	0	0	1	0	1	0	0	0
0	1	0	1	1	0	1	0	0	0
0	1	1	0	1	0	1	0	1	1
0	1	1	1	1	0	1	0	1	1
1	0	0	0	1	1	1	0	0	0
1	0	0	1	1	1	1	0	0	0
1	0	1	0	0	1	1	0	1	1
1	0	1	1	0	1	1	0	1	1
1	1	0	0	1	0	1	0	0	0
1	1	0	1	1	0	1	0	0	0
1	1	1	0	0	0	1	1	1	1
1	1	1	1	0	0	1	0	1	1

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

Questão 1 - b)

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

$$S = (N + K) + (\bar{B} \cdot C) + (A + \bar{D})$$

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

Questão 2 - a)

A	B	C	D	$W=(A'.B)$	$X=(B'.D)''$	$Y=(B'.C)$	$Z=(A.B')''$	$A=W+X$	$S=A+Y+Z$
0	0	0	0	0	1	0	1	1	1
0	0	0	1	0	0	0	1	0	1
0	0	1	0	0	1	1	1	1	1
0	0	1	1	0	0	1	1	0	1
0	1	0	0	1	1	0	1	1	1
0	1	0	1	1	1	0	1	1	1
0	1	1	0	1	1	0	1	1	1
0	1	1	1	1	1	0	1	1	1
1	0	0	0	0	1	0	0	1	1
1	0	0	1	0	0	0	0	0	0
1	0	1	0	0	1	1	0	1	1
1	0	1	1	0	0	1	0	0	1
1	1	0	0	0	1	0	1	1	1
1	1	0	1	0	1	0	1	1	1
1	1	1	0	0	1	0	1	1	1
1	1	1	1	0	1	0	1	1	1

Questão 2 - b)