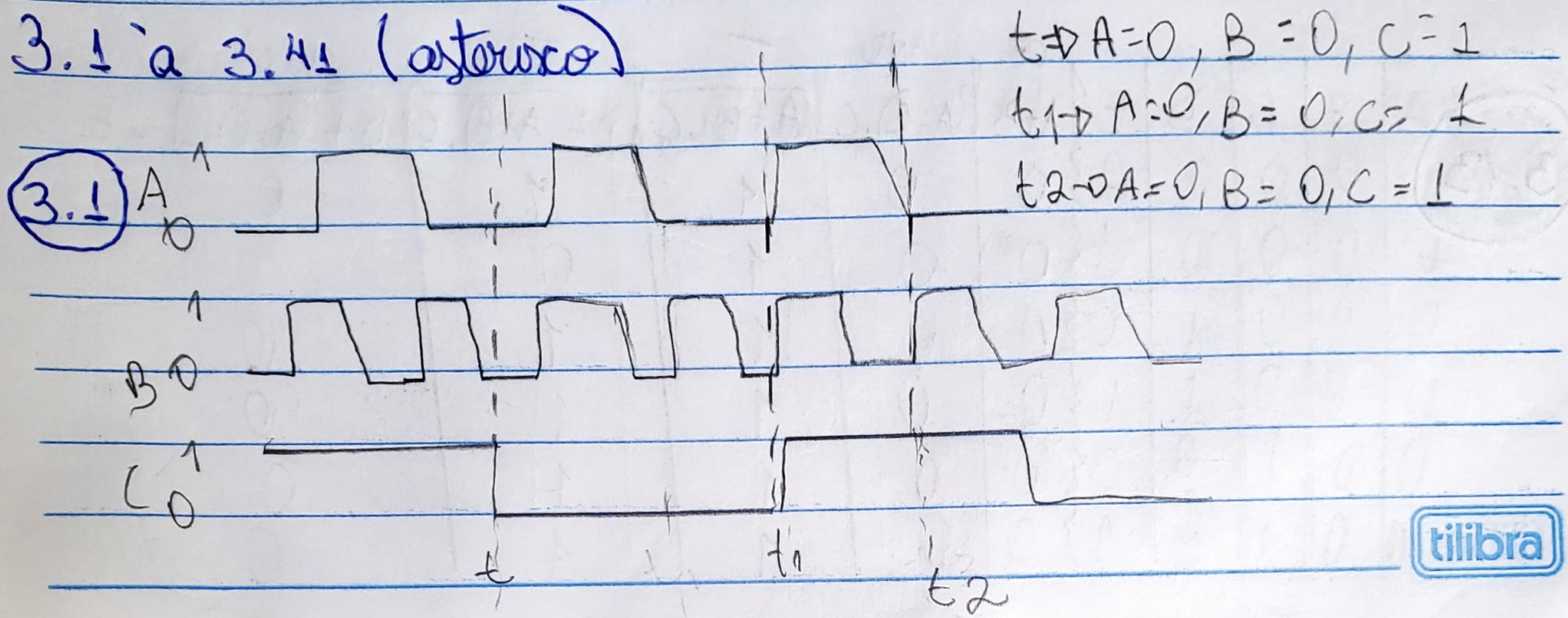
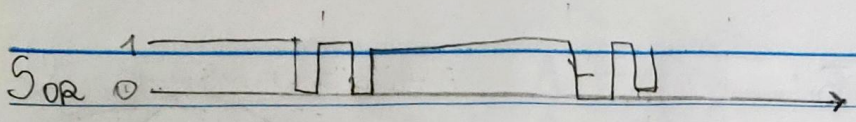
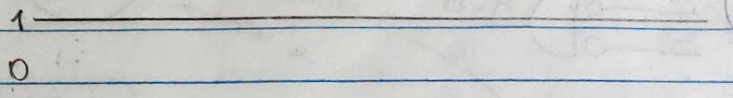
3.1 a 3.41 (asterisco)

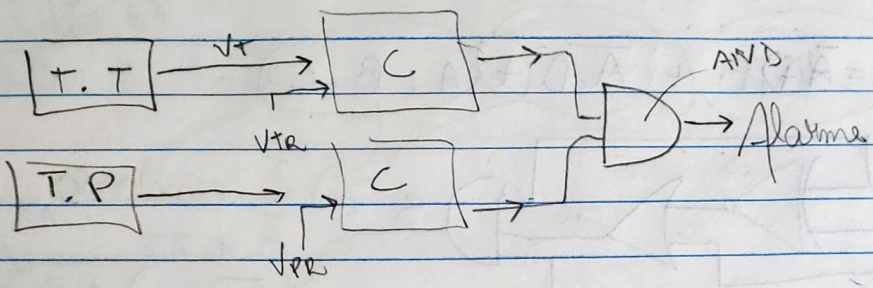




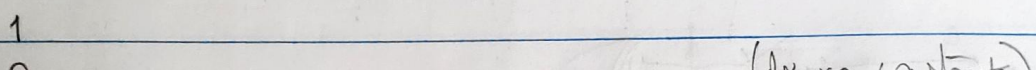
3.3



3.7

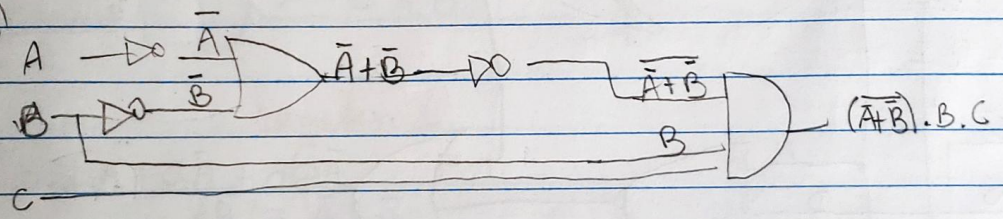


3.8



3.12

a)



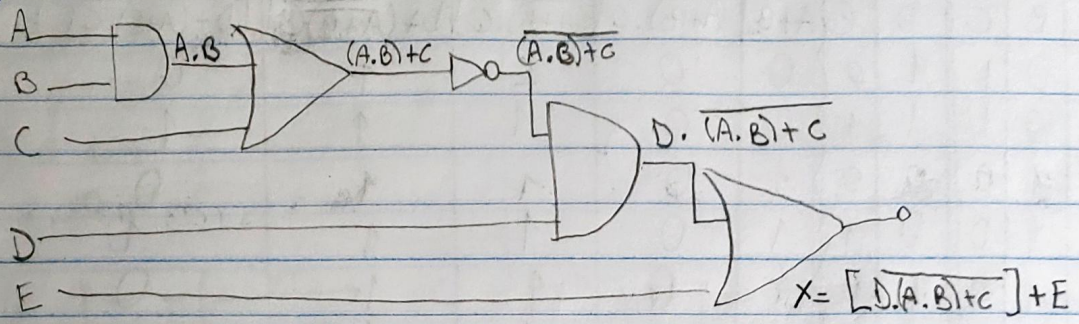
A	B	$\bar{A}+\bar{B}$	$\overline{\bar{A}+\bar{B}}$	R	B	C
0	0	1+1	0+0	= 0	0	0 = 0
0	1	1+0	0+1	= 1	0	1 = 0
1	0	0+1	1+0	= 1	1	0 = 0
1	1	0+0	1+1	= 1	1	1 = 1

3.13

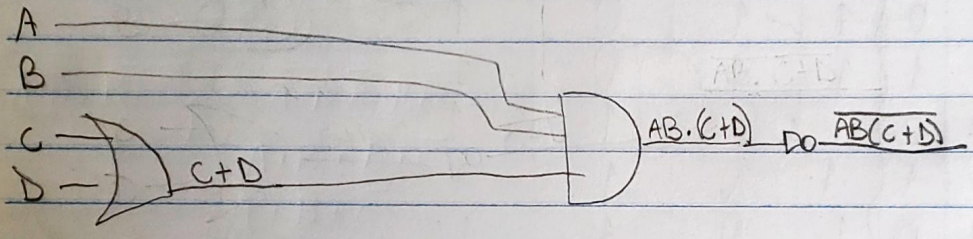
A	B	C	D	E	OR A+B	AND (A+B).C	$\overline{(A+B).C}$	D + $\overline{(A+B).C}$	D + $\overline{(A+B).C}$. E
0	0	0	0	0	0	0	1	1	0
0	0	0	0	1	0	0	1	0	
0	0	0	1	0	0	0	1	1	0
0	0	0	1	1	0	0	1	1	0
0	0	1	0	0	0	0	1	1	0
0	0	1	0	1	0	0	1	1	0

					(+) or	(x) and	—	(+) or	(x) and
A	B	C	D	E	A+B	(A+B).C	$\overline{(A+B).C}$	D+$\overline{(A+B).C}$	[D+$\overline{(A+B).C}$].E
0	0	0	0	0	0	0	1	1	0
0	0	0	0	1	0	0	1	1	1
0	0	1	0	0	0	0	1	1	0
0	0	1	0	1	0	0	1	1	1
0	1	0	0	0	1	0	1	1	0
0	1	0	0	1	1	0	1	1	1
0	1	0	1	0	1	0	1	1	0
0	1	0	1	1	1	0	1	1	1
0	1	1	0	0	1	1	0	0	0
0	1	1	0	1	1	1	0	0	0
0	1	1	1	0	1	1	0	1	0
0	1	1	1	1	1	1	0	1	1
1	0	0	0	0	1	0	1	1	0
1	0	0	0	1	1	0	1	1	1
1	0	0	1	0	1	0	1	1	0
1	0	0	1	1	1	0	1	1	1
1	0	1	0	0	1	1	0	0	0
1	0	1	0	1	1	1	0	0	0
1	0	1	1	0	1	1	0	1	0
1	0	1	1	1	1	1	0	1	1
1	1	0	0	0	1	0	1	1	0
1	1	0	0	1	1	0	1	1	1
1	1	0	1	0	1	0	1	1	0
1	1	0	1	1	1	0	1	1	1
1	1	1	0	0	1	1	0	0	0
1	1	1	0	1	1	1	0	0	0
1	1	1	1	0	1	1	0	1	0
1	1	1	1	1	1	1	0	1	1

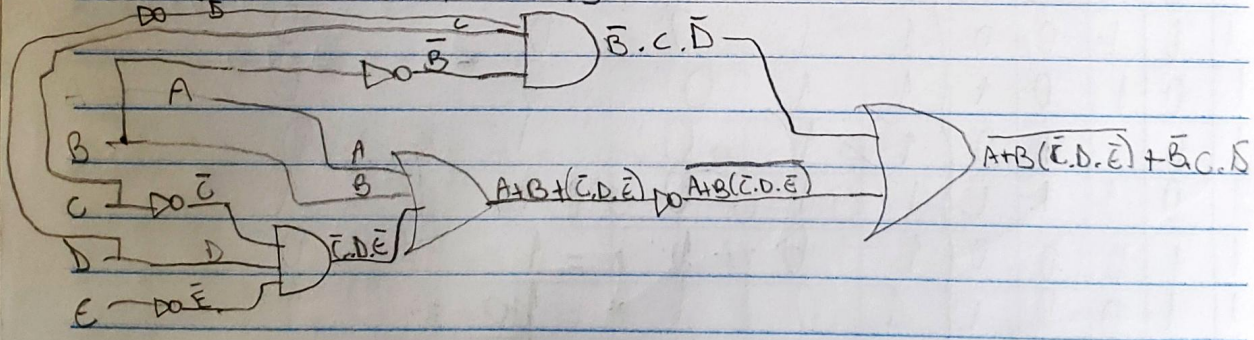
3.14



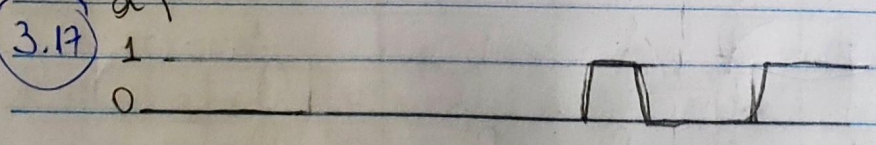
3.16 a) $X = AB.\overline{(C+D)}$



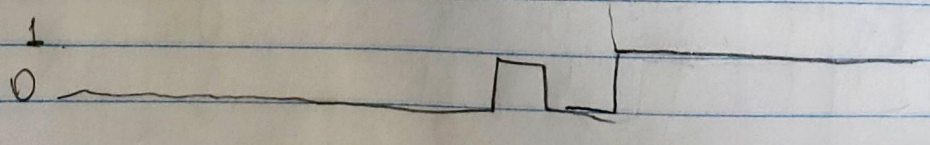
b) $z = \overline{(A + B + (\bar{C}.D.\bar{E}))} + \bar{B}.C.\bar{D}$



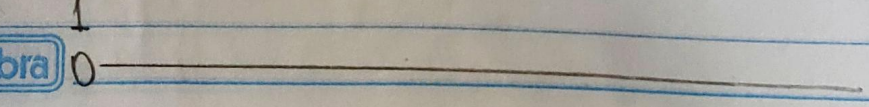
3.17 a)



b)



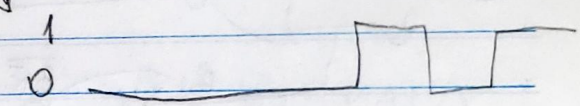
c)



3.19 — $(\overline{A+B})$ — $X = \overline{(\overline{A+B}).(\overline{C+B})}$

A	B	C	$\overline{A+B}$	$\overline{C+B}$	$\overline{(\overline{A+B}).(\overline{C+B})}$
0	0	0	1	0	1
→ 0	0	1	1	1	0
0	1	0	0	0	1
0	1	1	0	0	1
1	0	0	0	0	1
1	0	1	0	1	0
1	1	0	0	0	1
1	1	1	0	0	1

* Mesma onda de saída do exercício 3.17a



3.23

a) $A+1 = 1$

b) $A.A = A$

c) $B.\bar{B} = 0$

d) C

e) 0

f) D

g) D

h) $C+\bar{C} = 1$

i) $G+GF = G$

j) $y+\bar{w}y = 1$

3.24 a) $X = (M+N)(\bar{M}+P)(\bar{N}+\bar{P})$

$X = M(\bar{M}+P)(\bar{N}+\bar{P}) + N(\bar{M}+P)(\bar{N}+\bar{P})$

$X = M\bar{M}(\bar{N}+\bar{P}) + MP(\bar{N}+\bar{P}) + N\bar{N}(\bar{M}+P) + N\bar{P}(\bar{M}+P)$

anulam

$X = 0 + MP(\bar{N}+\bar{P}) + 0 + N\bar{P}(\bar{M}+P)$

$X = MP\bar{N} + MP\bar{P} + N\bar{P}\bar{M} + N\bar{P}P$

$X = MP\bar{N} + 0 + N\bar{P}\bar{M} + 0$

$X = M\bar{N}P + \bar{M}N\bar{P}$

3.26 a) $\overline{\bar{A}B\bar{C}}$

c) $\overline{AB\bar{C}\bar{D}}$

e) $\overline{AB}$

g) $\overline{A(B+\bar{C})D}$

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

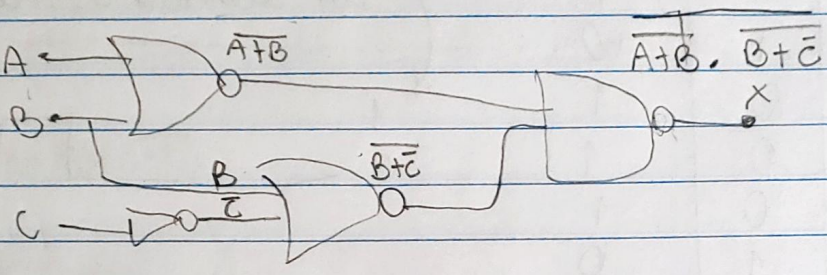
c) $\overline{AB\bar{C}\bar{D}} = \bar{A} + \bar{B} + CD$

e) $\overline{\bar{A}B} = A + \bar{B}$

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

*

3.27



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

$= A + B + B + \bar{C}$

$= A + B + \bar{C}$

3.32 a) W = 1

b) T = 1 e P = 1 ou R = 0

3.33 a) 0 + 0 = 1
0 + 1 = 0
1 + 0 = 0
1 + 1 = 0

NOR

*

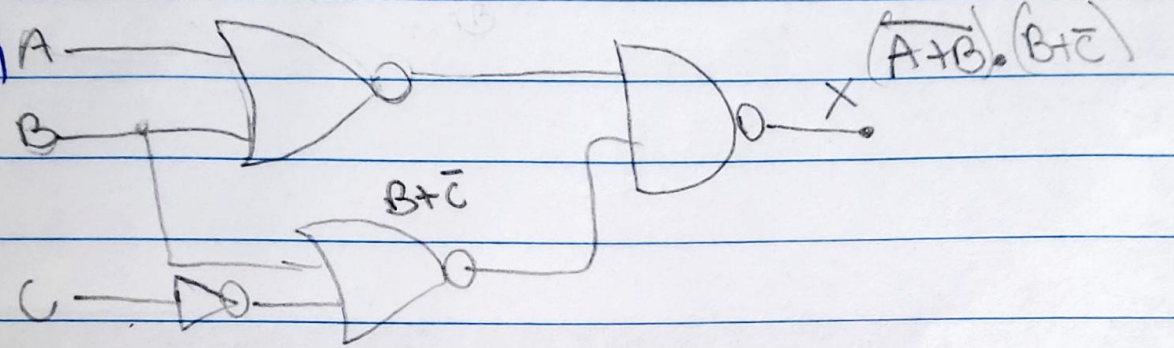
b) 0 + 0 = 0
0 + 1 = 1
1 + 0 = 1
1 + 1 = 1

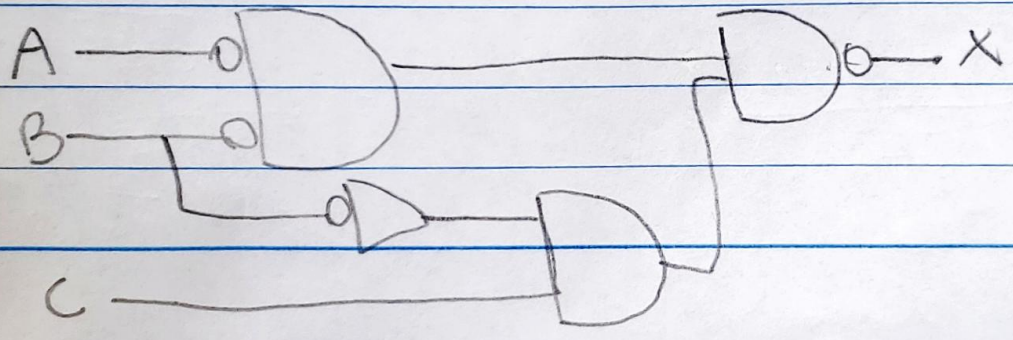
OR

c) 1 + 1 = 0
0 + 1 = 1
1 + 0 = 1
0 + 0 = 1

NAND

3.35 a)



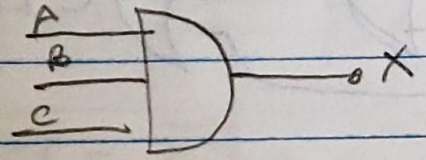


3.38 D=0

3.39 a) Nível alto
b) Nível baixo

3.41 A e B=0 ou A e B = 1 → liga.

3.6 a)



Se A=1, B=1, C=1: