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3e4.2 4.2

<u>T2:</u>						
Х	X + 1	=	1			
0	1	=	1			
1	1	=	1			

T3:			
Х	X + X	=	Х
0	0	=	0
1	1	=	1

3e4.3 4.3

T3'			
Х	Χ·Χ	=	Х
0	0	=	0
1	1	=	1

3e4.4 4.4

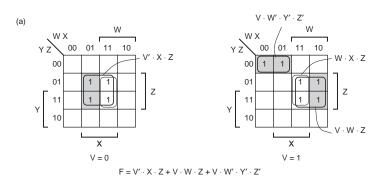
T6				
Х	Υ	X + Y	=	Y + X
0	0	0	=	0
0	1	1	=	1
1	0	1	=	1
1	1	1	=	1

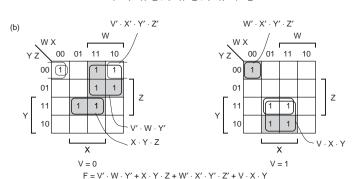
3e4.39 4.34

(a) True. If $A \cdot B = 0$ then either A = 0 or B = 0. If A + B = 1 then either A = 1 or B = 1. Therefore, A, B = 0, 1 or 1, 0, 1 and A = B'.

3e4.58 4.50 (a) 16 ns. (c) 18 ns. (d) 10 ns.

3e4.72 4.59

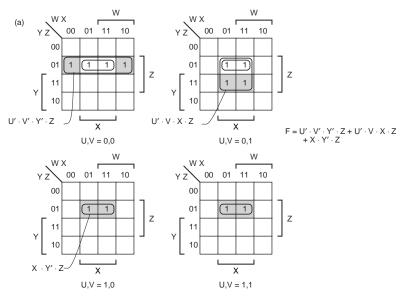




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3e4.74 4.60



3e4.83
4.61 The name of the circuit comes from its output equation, F = 2B OR NOT 2B. On the falling edge of 2B, this circuit generates a negative pulse on F. Note that this is typically an unreliable way to generate a pulse because the width of the pulse depends on the inverter delays, which in turn depend on electrical characteristics that vary with voltage, temperature, and the IC manufacturing process.

