

ECE 130 HW#8 – Due Monday, March 29

Implement the NAND-NAND circuit from hw#6 in your simulator package. **Print out a copy of your circuit.**

Produce a timing diagram with clocked input signals to prove that it follows the specified truth table.

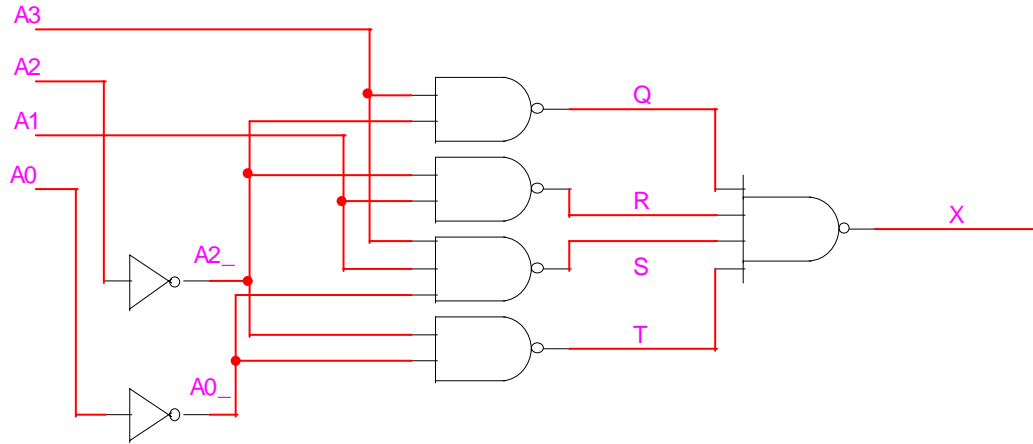
**Print out the diagram, annotate the diagram** to illustrate how signal changes propagate through the circuit.

Use your annotations also to **prove that the circuit works correctly** (hint: when are the values high and low?).

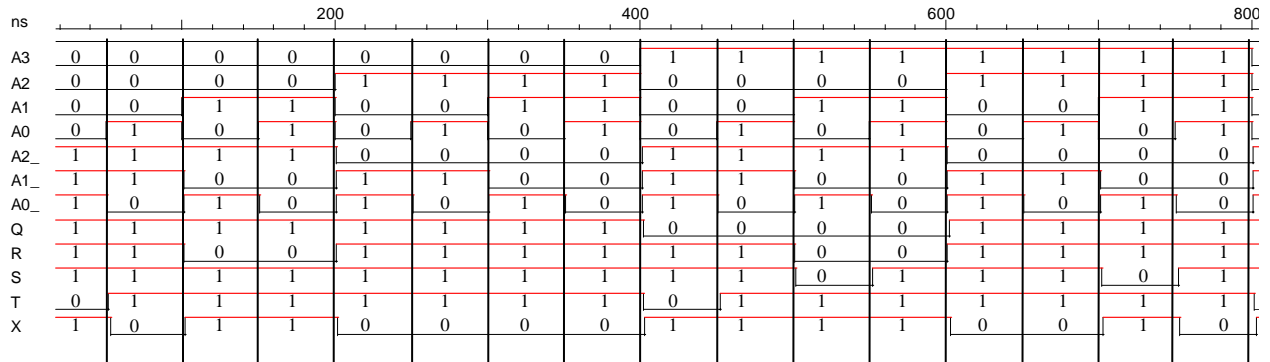
A3	A2	A1	A0	X
0	0	0	0	1
0	0	0	1	0
0	0	1	0	1
0	0	1	1	1
0	1	0	0	0
0	1	0	1	0
0	1	1	0	0
0	1	1	1	0
1	0	0	0	1
1	0	0	1	1
1	0	1	0	1
1	0	1	1	1
1	1	0	0	0
1	1	0	1	0
1	1	1	0	1
1	1	1	1	0

$$X = A3*A2' + A2'*A1 + A3*A1*A0' + A2' *A0'$$

Circuit:



Timing Diagram:



The output matches the truth table for every possible input combination.