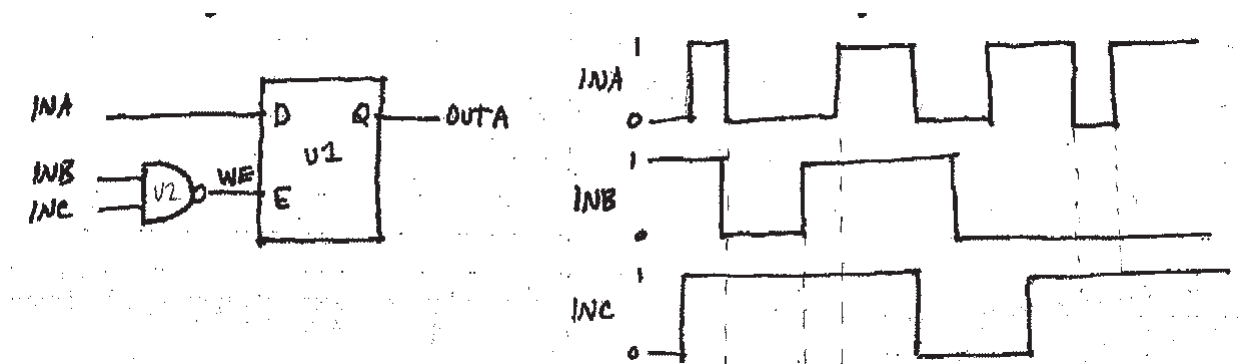**Homework Assignment #2**

Reading:

Chapter 2 of Textbook

Problems:

Chapter 3: 6, 7, 13, 14, 21, 23, 27, 32, 34, 44

4 Supplemental problems – yes, you need to do these. ☺

S1. Given the following circuit diagram and timing diagram, add to the timing diagram the WE and OUTA signals.

S2. Reduce the following express and indicate the properties/axioms you use along the way.

F = (A' + B' + C')' + (AB(A' + B')D) + (BD'A(A' + B')) + (BC'A)

S3. Reduce the following expression and indicate the properties/axioms used along the way. Comment on the result, does it look familiar?

F = CA'D + (D' + A' + C)' + (ADC'B) + ((A'D'C)'(C'D'A)')' + BD'C'A

S4. Use the circuit diagram below to complete the timing diagram (finish INA, WE2 and OUT). Note that U1 is a flip-flop and U2 is a latch.

CLK

WE1

INA

WE2

INB

OUT