

Now, use **DeMorgan's Theorem on the Boolean equation above** (show your work)

Verify with the instructor the final equation.

Draw the circuit for the NEW Boolean expression (label the circuit as if this was a continuation of the circuit above, including proper pin numbers, components designators and part numbers/values):

Once the instructor has verified your circuit design, and **without destroying the previous circuit**, build the new circuit.

Read *Microcomputer Theory and Servicing*” By Stuart Asser section 2.8 (in supplied .pdf on the class webpage)

Remove the LED and Resistor from the output of the original circuit. Using the Logic Probe, confirm the truth table once more.

How does the Logic Probe indicate a HIGH output?

How does the Logic Probe indicate a LOW output?

Now touch the Logic Probe to pin 11 of the 3 input NAND IC from the original circuit. **What does the logic probe show?**

What does it mean?

Describe in detail how a logic probe can be used to find errors in a logic circuit.