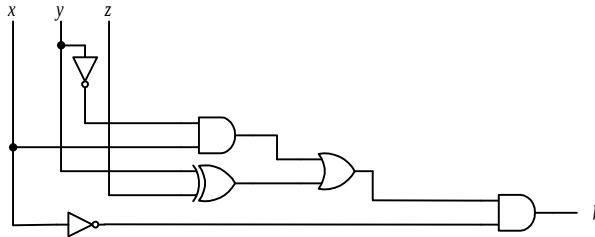


CS/EE 120A

Homework #2 Given 2/15/01. Due 2/22/01

1. Derive the Boolean function that describes the following circuit:



2. Synthesize (construct) a 3-bit comparator circuit that outputs a 1 if the number is greater than or equal to 5, and 0 otherwise. In other words, a circuit that outputs a 0 if the input is a number between 0 and 4, and outputs a 1 if the input is a number between 5 and 7. Use K-map to simplify your circuit.
3. Convert the following circuit to use only 3-input NAND gates

