HW4-2

1. Design a combinational circuit that compares two 4-bit unsigned numbers A and B to see whether A is greater than B. The circuit has one output X, so that $X = 0$ if $A \leq B$ and $X = 1$ if $A > B$.

2. Design a 4x4 multiplier using four-bit adders (Ripple-Carry adders) and other logic gates.

3. Design a three-way magnitude comparator that outputs true if its three inputs are in strict order: a<b<c. a, b, and c are all three-bit unsigned numbers.

4. Design a 4->2 priority encoder with input D[3:0] and output A[1:0] where D_0 has the highest priority and D_3 has the lowest priority.

5. Use Verilog to construct a model for Prob. 3 and run simulations to verify the results. (Use the test pattern provided)

