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CS 2200: Theory of Computer Science

HW 2

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a. less than 1296.

b. 2 tests with 36 cases total

c. Unlike the full ALU.cmp, the zr and ng status outputs are ignored. This is only a partial test, so the testing and implementation of the gates used the construct the ALU will be the only things needed. The nostat.tst helps concentrate on getting the correct ALU computation.

d. 1296 and greater.

e. 2 tests with 36 tests total

f. To thoroughly test our ALU, we needed to include tests for the gates used to construct our ALU. We tested our 16 bit AND gate, 16 bit NOT gate, 16 bit Multiplexer, an 8 bit way OR and a regular NOT gate. We had 6 inputs and 3 outs, but if you take the powers of two, it is actually a total of 64 and 8.

Also, ALU NoStat test needed to be included because any comparison failures during the ALU.tst will be caused by errors in the handling of the ignored status outputs.