COE 202, Term 131
Digital Logic Design

Quiz# 4

Date: Tuesday, Nov. 25

Q1. Design a circuit that accepts two 2-bit unsigned numbers $A = A_1A_0$ and $B = B_1B_0$. The circuit produces $A - B$ when $A > B$, and produces $A + B$ otherwise. Find the following:

(a) The number of outputs produced by the circuit.
(b) The truth table of the circuit.
(c) The minimal product-of-sums expression for each output.

Q2. Convert the AND/OR/NOT logic diagram shown below to a NAND logic diagram: