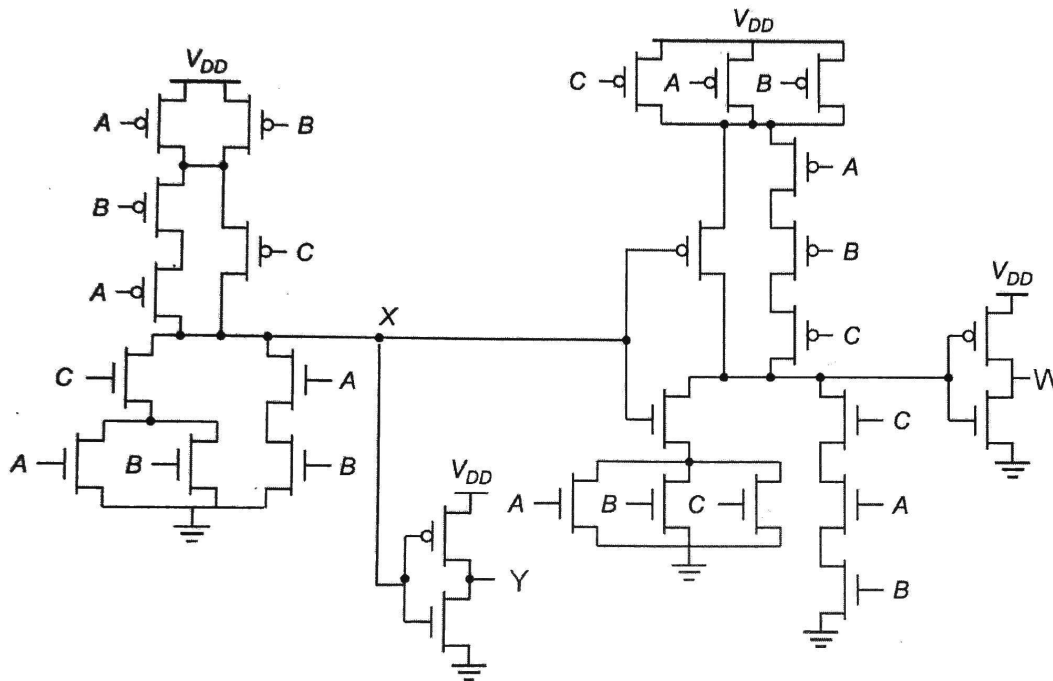# CoCO Studio #2 (25 Points Total)

INDIVIDUAL ACTIVITIES!

1. (15 points) Given the following circuit with 3 inputs (A, B, and C) and 2 outputs (W and Y). Fill out the following truth table and describe its function.
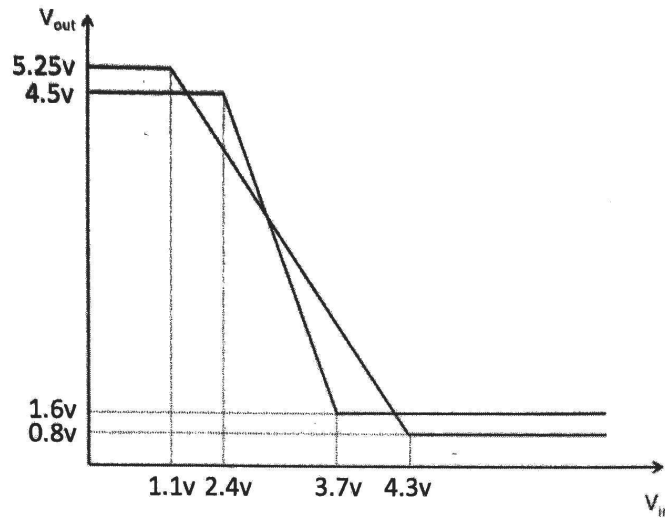

A	B	C	W	Y	X
0	0	0	0	0	1
0	0	1	1	0	1
0	1	0	1	0	0
0	1	1	0	1	0
1	0	0	1	0	0
1	0	1	0	1	0
1	1	0	0	1	0
1	1	1	1	1	0

this is on adder.

A Full Adder

The W bit is the output of the addition. The Y bit is the resultant carry value of the addition.

2. (10 points) Two Gates have VTC's are shown. Report the best Noise Margins among the two, below.

$NM_L = \underline{0.8V}$

$NM_H = \underline{0.95V}$

(*One* value for each answer, please!)

Gate 1:

$NM_H = 5.25 - 4.3 = 0.95V$

$NM_L = 1.1V - 0.8V = 0.3V$

Gate 2:

$NM_H = 4.5V - 3.7V = 0.8V$

$NM_L = 2.4V - 1.6V = 0.8V$