$\qquad$

1) What is the column of the truth table for the Output signal, in binary order for Input1 and Input0 of $00,01,10$, 11?


1, 0, 0, 1
2) Which output signal is asserted for all possible values for Input1 (most significant) and Input0 (least significant) in binary order $00,01,10,11$ ?

$X, Z, W, Y$
3) Draw the truth table for the following, where $A, B$, and $C$ are inputs:


| $A$ | $B$ | Cin | S | Cout |
| ---: | ---: | ---: | ---: | ---: |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 1 | 0 |
| 0 | 1 | 0 | 1 | 0 |
| 0 | 1 | 1 | 0 | 1 |
| 1 | 0 | 0 | 1 | 0 |
| 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | 0 | 0 | 1 |
| 1 | 1 | 1 | 1 | 1 |

4) What is the above diagram? Full Adder

5) What is the above diagram? Multiplexor
