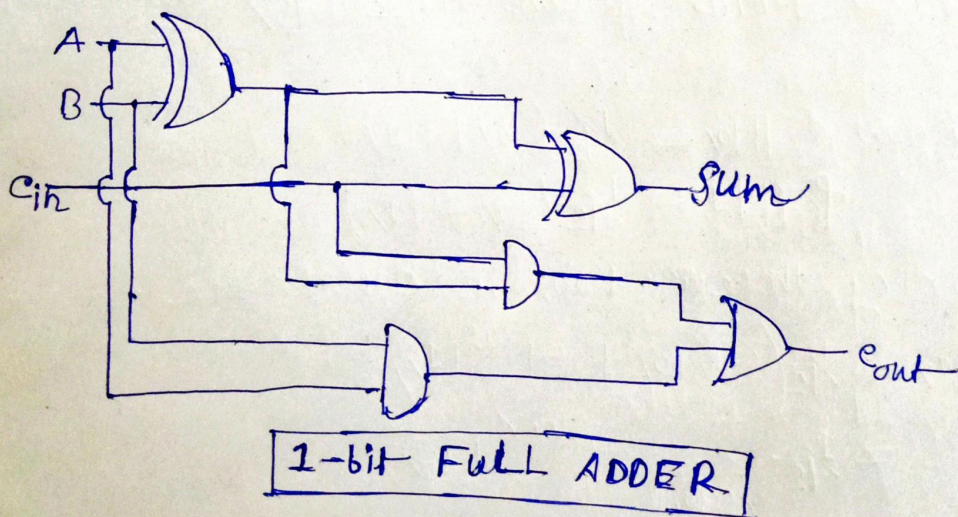
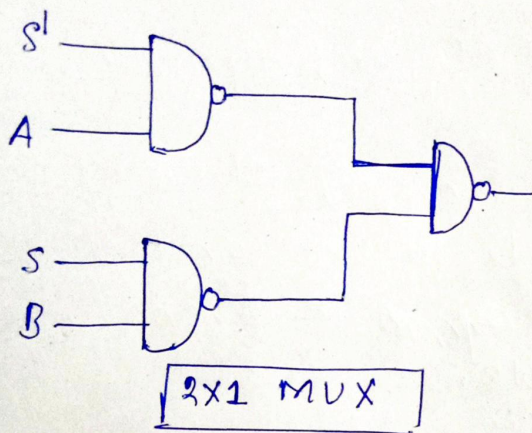


Assignment - 2

Design an adder subtractor 8 bit circuit using any 2-input gates, and count the number of gates required & the delay of the circuit.

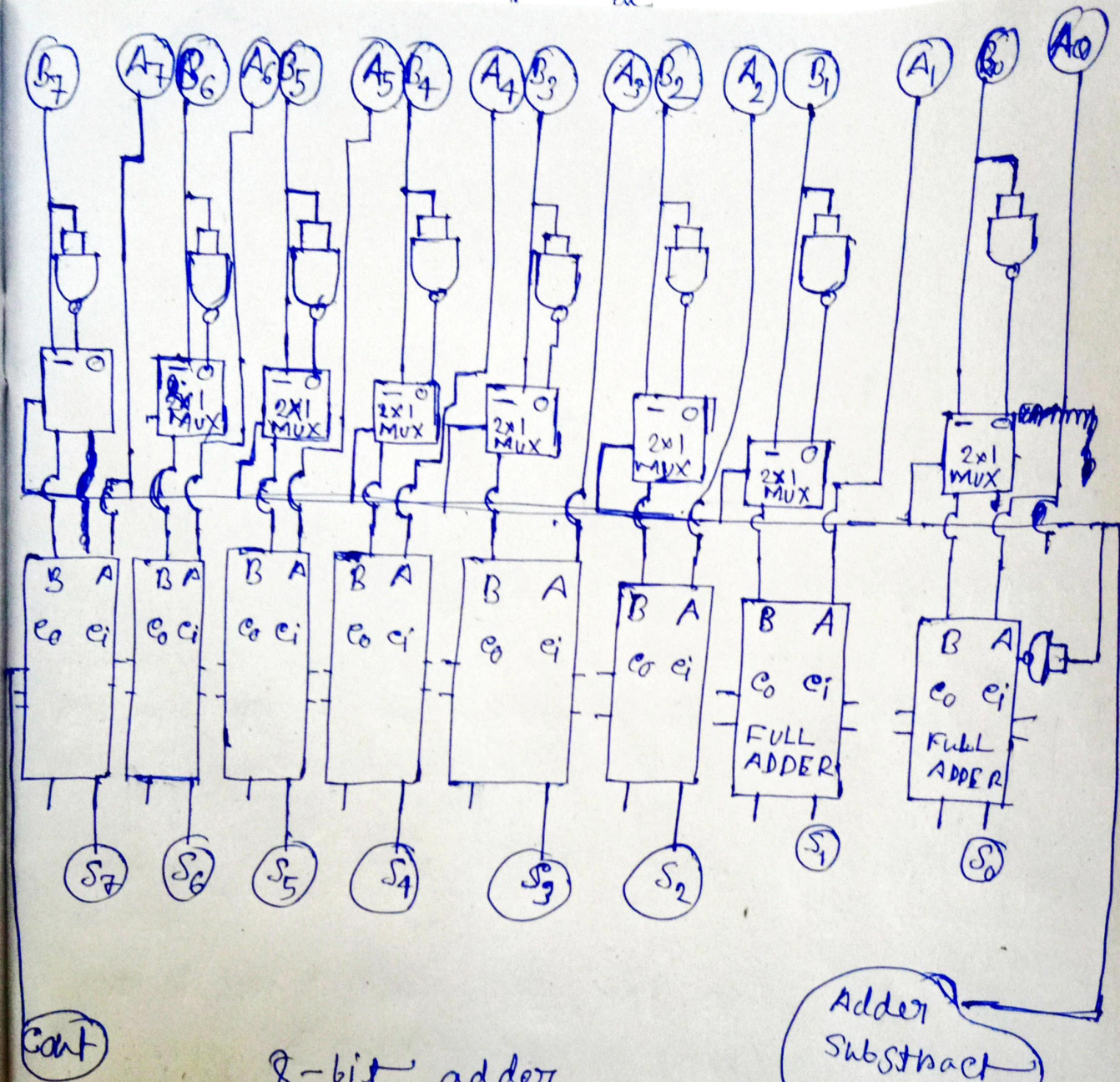
⇒ We first draw the basic circuit of then the full circuit.



Number of gates in a 2x1 Multiplexer = 3

Number of gates in a 1-bit Full

FULL-ADDER = 5 .



8-bit adder

- subtraction circuit

Adder
Subtractor

Total no of gates = $9 + 8(3) + 8(5) = 73$.