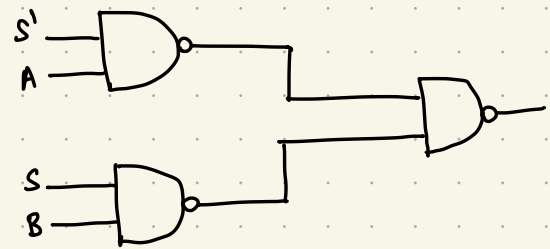


Assignment 2

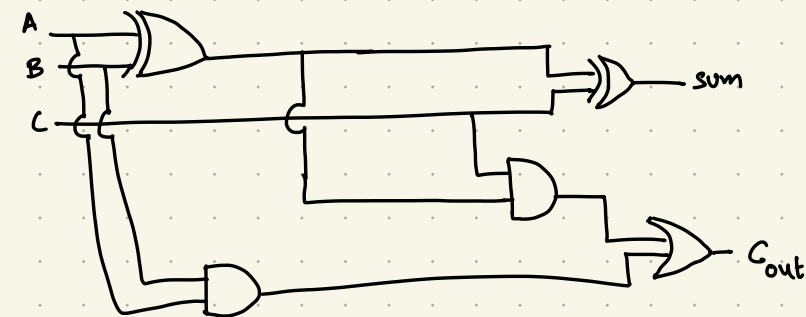
Q1) Design an adder subtractor 8-bit circuit using any 2-input gates and count the number of gates required.

Solⁿ:

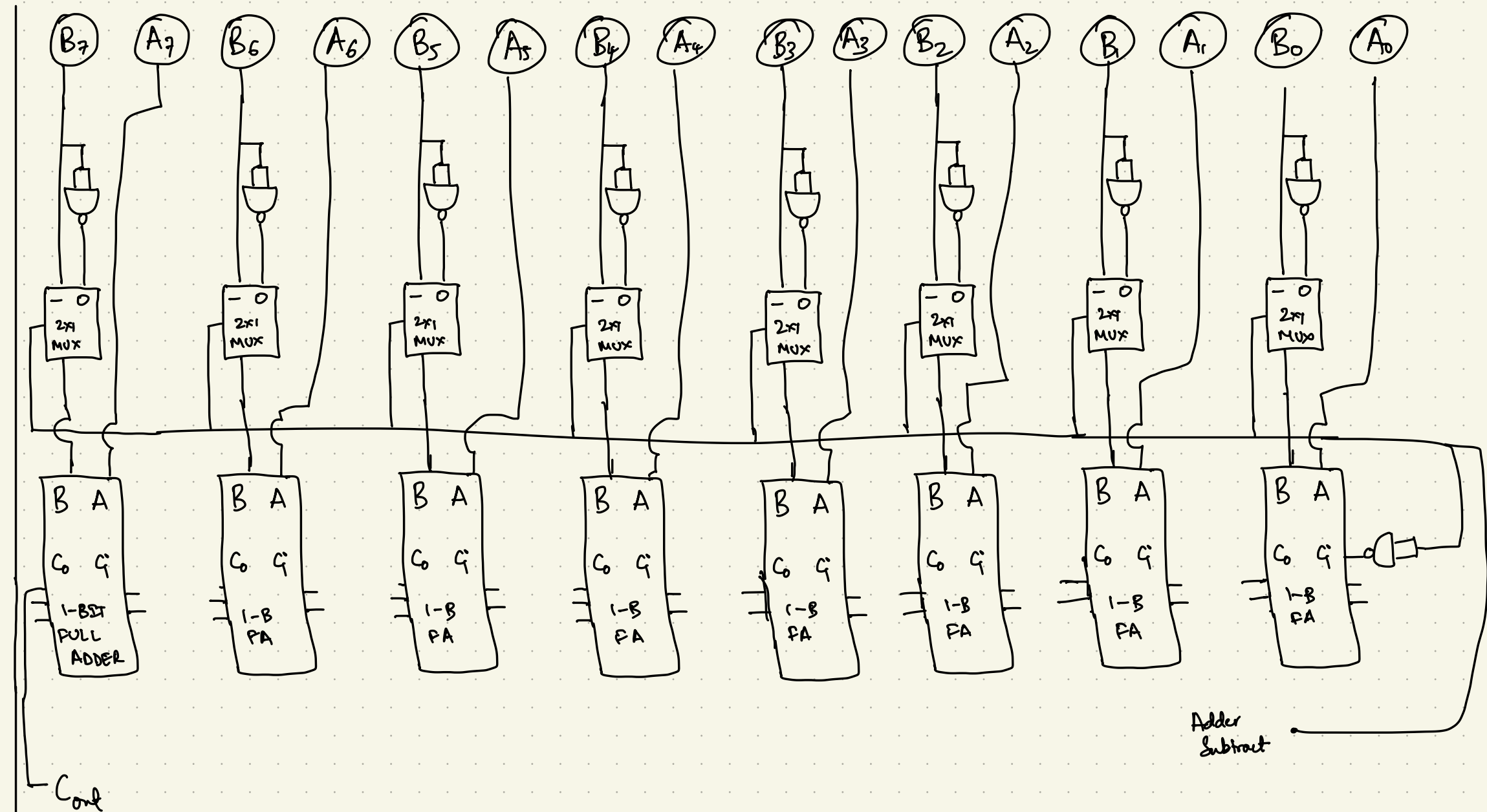
We use the following circuits:



2x1 MUX
No. of gates = 3



1 bit full adder
No. of gates = 5



8-BIT ADDER-SUBTRACTION CIRCUIT

$$\begin{aligned} \text{Total No. of gates} &= 9 + 8 \times 3 + 8 \times 5 \\ &= 73 \text{ gates} \end{aligned}$$