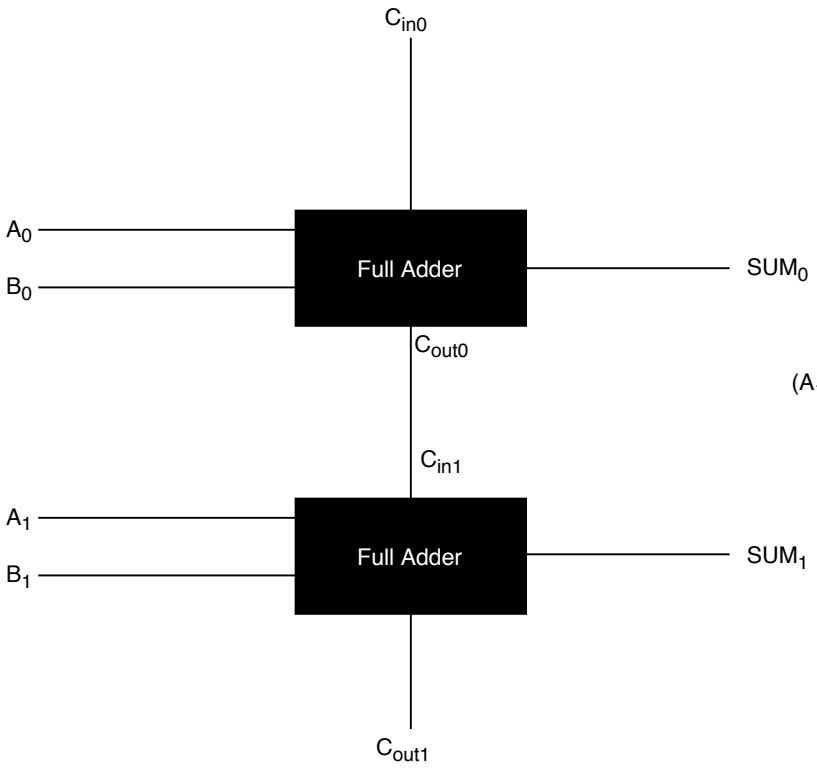

Boolean Expressions

$(A_0 \oplus B_0) \oplus C_{in0} = SUM_0$

$(A_0 \oplus B_0) \cdot C_{in0} = C_{out0}$

$C_{out0} = C_{in1}$

$(A_1 \oplus B_1) \oplus (C_{in0} \cdot (A_0 \oplus B_0)) = SUM_1$

$(A_1 \oplus B_1) \cdot C_{in0} \cdot (A_0 \oplus B_0) = C_{out1}$

IC List of 2-bit Adder

Four 7486 Quad 2-Input XOR Gate
Four 7408 Quad 2-Input AND Gate
Two 7432 Quad 2-Input OR Gate

74LS08:	74LS32:	74LS86:
GND-7	GND-7	GND-7
+5-14	+5-14	+5-14