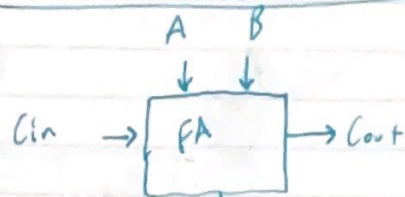


4-bit Ripple Carry adder

1-bit Truth Table



$$S = (A \oplus B) \oplus C_i$$

$$C_{out} = (C_i B) + (A B) + (C_i A)$$

Cin	A	B	Cout	S
0	0	0	0	0
0	0	1	0	1
0	1	0	0	1
0	1	1	1	0
1	0	0	0	1
1	0	1	1	0
1	1	0	1	0
1	1	1	1	1

Sum (S) truth table for Cin = 0:

ab	00	01	11	10
0		1	1	0
1	1		1	

Carry-out (Cout) truth table for Cin = 1:

ab	00	01	11	10
0			1	
1	1	1	1	1

4-bit Ripple Carry adder:

