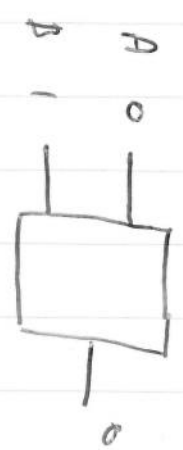
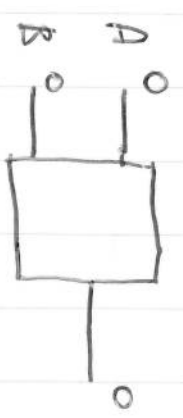


TRUTH TABLE SHOWING ALL POSSIBLE FUNCTIONS OF TWO

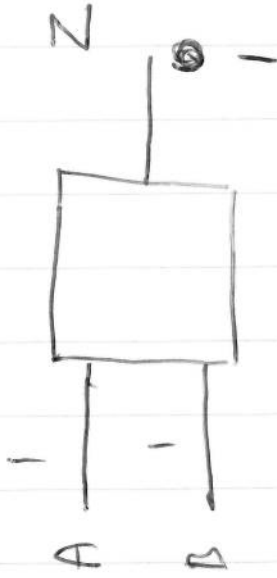
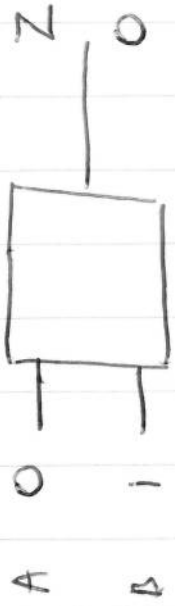
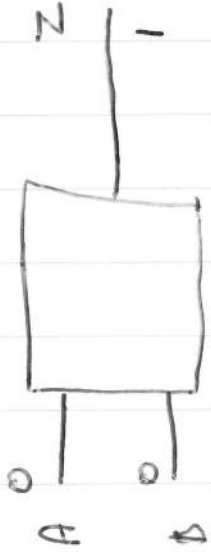
BINARY VALUES

A	B	FALSE	$\overline{A+B}$ NOR A·B	\overline{A} A	$\overline{A \cdot B}$ A·B	\overline{B} B	$A \oplus B$ XOR NAND	$\overline{A \cdot B}$ AND NOR	$A \cdot B$ AND XOR	B	$\overline{A+B}$ A	$A \cdot \overline{B}$ A or	$\overline{A+B}$ TRUE
0	0	0	1	0	0	1	0	1	0	0	0	0	1
0	1	0	0	1	0	0	1	0	0	1	0	0	1
1	0	0	0	0	1	1	1	1	0	0	1	1	1
1	1	0	0	0	0	0	0	0	1	1	1	1	1



②

$$Z = A + \overline{B}$$



(2) (3)

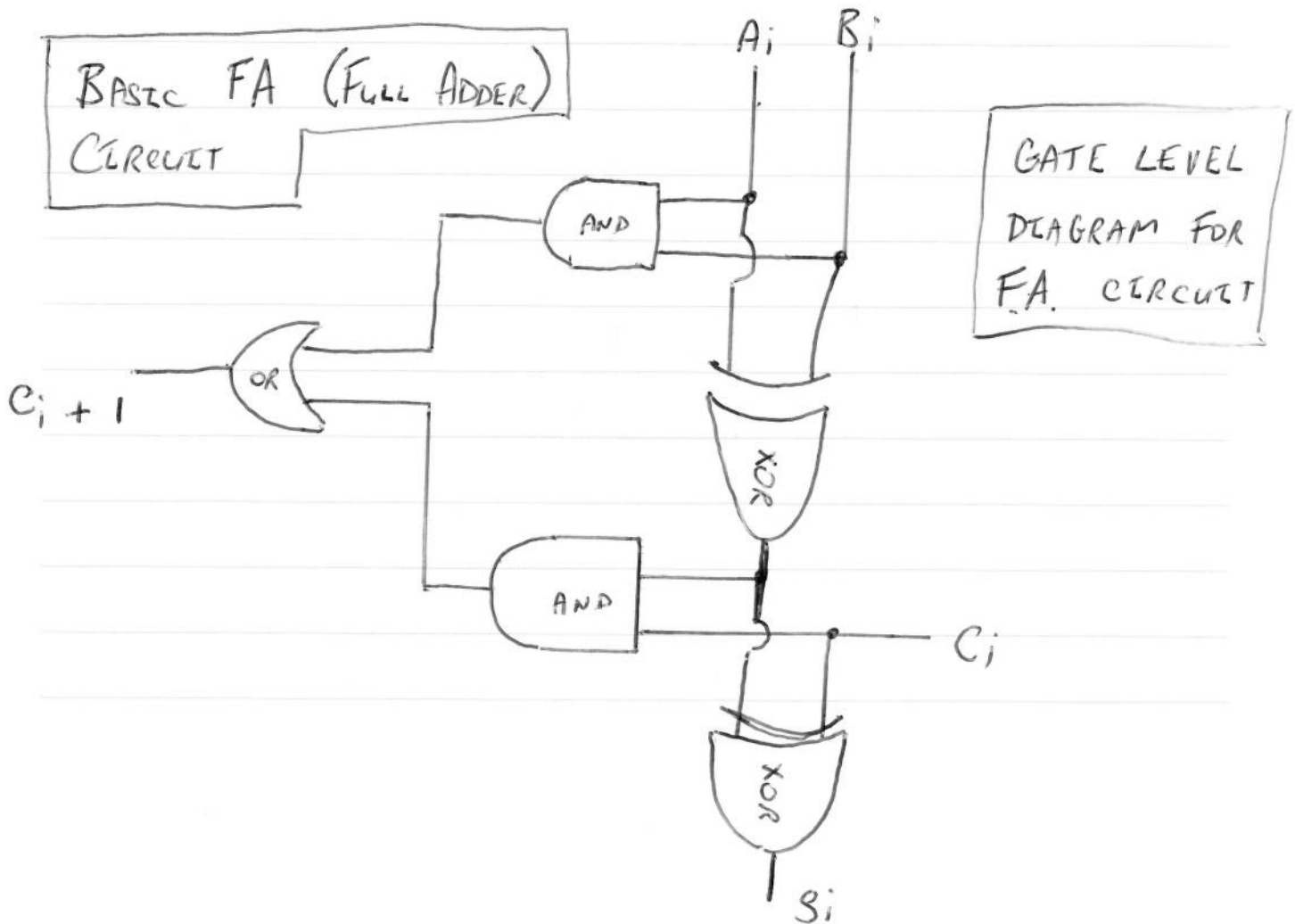
FULL ADDER

CARRY OR Sum

Cout

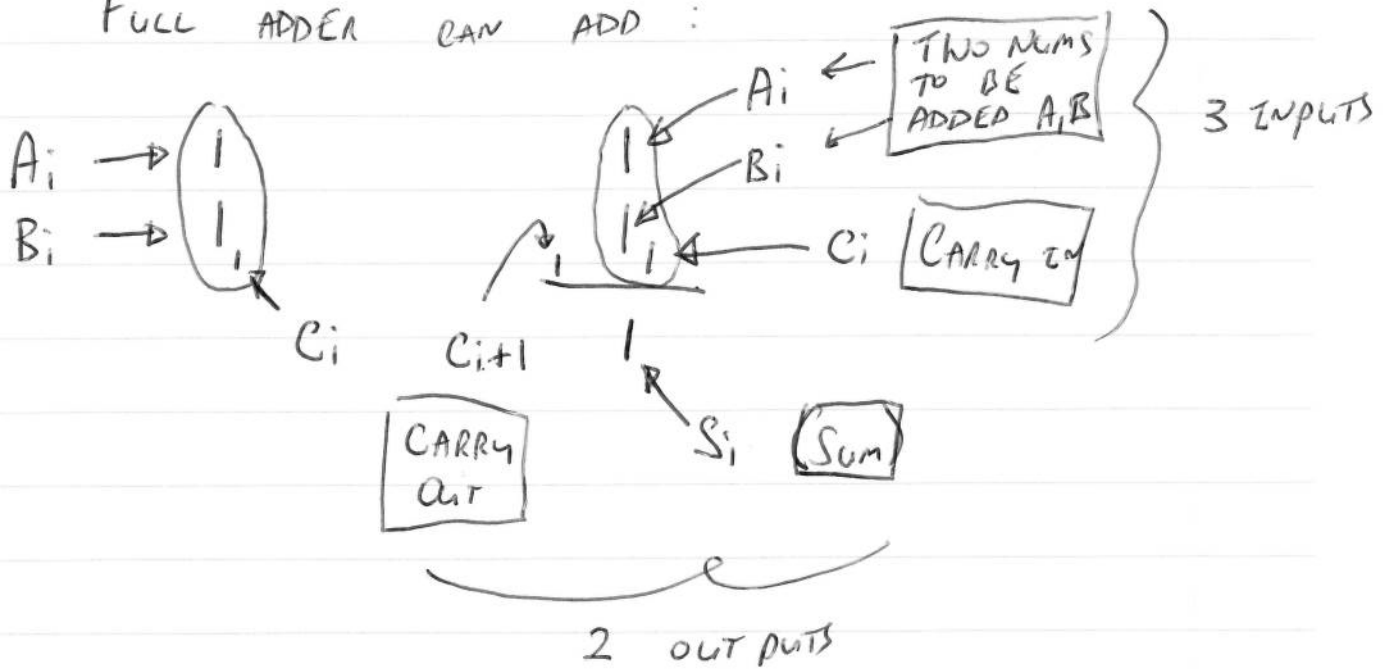
3 NUMS

A_i	B_i	C_i	S_i	C_{i+1}
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

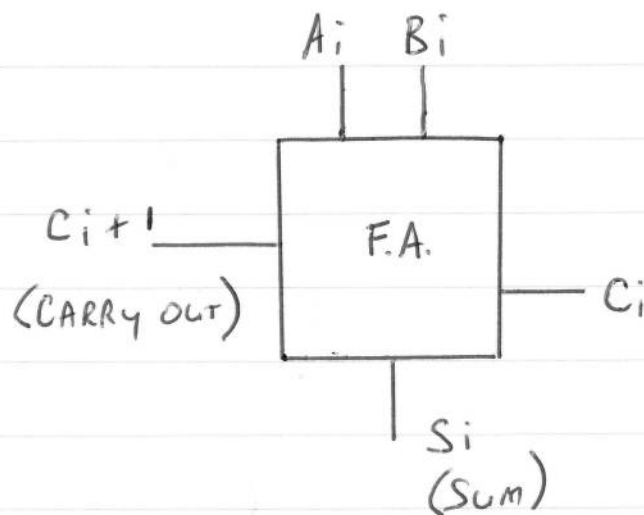


(4)

FULL ADDER CAN ADD :



BLOCK LEVEL DIAGRAM FOR FULL ADDER



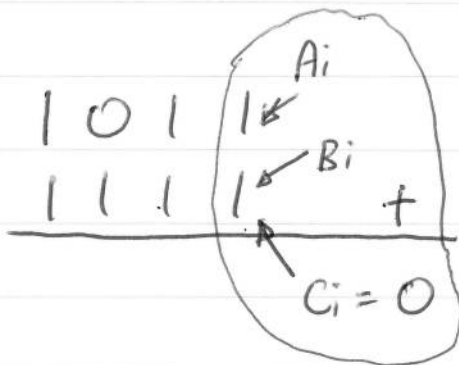
NONE OF THE GATES ARE SHOWN

(5)

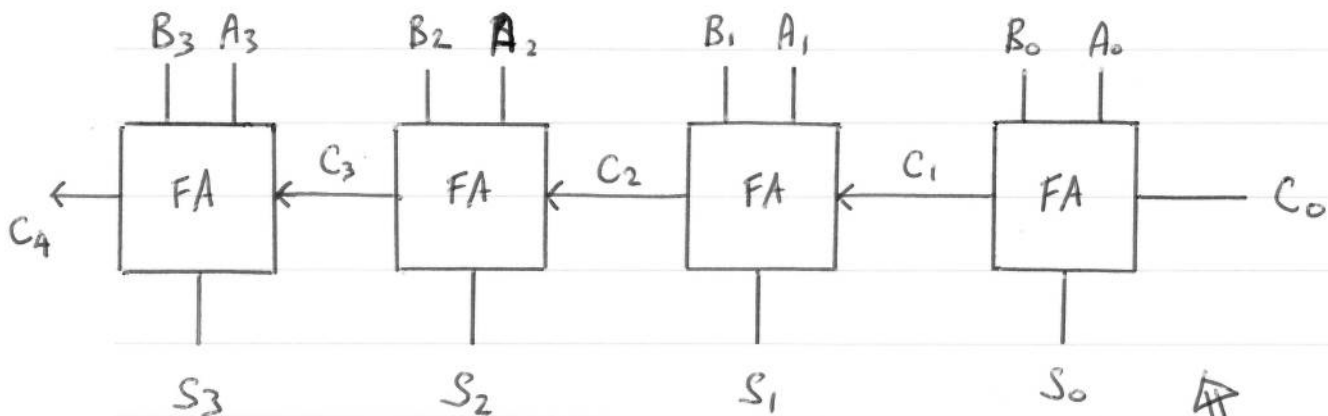
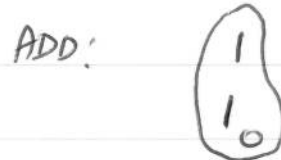
RIPPLE ADDER

E.G. WE WANT TO ADD 2 4 BIT NUMBERS

$$\begin{array}{r} 1011 \\ 1111 \\ \hline \end{array} +$$



FULL ADDER WILL



RI P P L E A D D E R F O R
2 F O U R - B I T N U M B E R S

