



The student **must bring this notebook correctly filled at the beginning of the corresponding lab session**, where it must be shown to the assistant professor. The circuit cannot be built if this form is not completed or is incorrect.

## INTRODUCTION TO COMPUTERS

### LAB 2 NOTEBOOK

**1-bit full adder truth table**

C <sub>in</sub>	A	B	C <sub>out</sub>	S
0	0	0		
0	0	1		
0	1	0		
0	1	1		
1	0	0		
1	0	1		
1	1	0		
1	1	1		

**Karnaugh Maps**

A _____			
B _____			
0	1	3	2
C <sub>in</sub>			
4	5	7	6

S =

A _____			
B _____			
0	1	3	2
C <sub>in</sub>			
4	5	7	6

C<sub>out</sub> =

**1-bit full adder design**

*Show for each element and port the chip number and corresponding pin*

### 2-bit adder truth table

Cin	A <sub>1</sub>	A <sub>0</sub>	B <sub>1</sub>	B <sub>0</sub>	Cout	S <sub>1</sub>	S <sub>0</sub>
0	0	0	0	0			
0	0	0	0	1			
0	0	0	1	0			
0	0	0	1	1			
0	0	1	0	0			
0	0	1	0	1			
0	0	1	1	0			
0	0	1	1	1			
0	1	0	0	0			
0	1	0	0	1			
0	1	0	1	0			
0	1	0	1	1			
0	1	1	0	0			
0	1	1	0	1			
0	1	1	1	0			
0	1	1	1	1			

Cin	A <sub>1</sub>	A <sub>0</sub>	B <sub>1</sub>	B <sub>0</sub>	Cout	S <sub>1</sub>	S <sub>0</sub>
1	0	0	0	0			
1	0	0	0	1			
1	0	0	1	0			
1	0	0	1	1			
1	0	1	0	0			
1	0	1	0	1			
1	0	1	1	0			
1	0	1	1	1			
1	1	0	0	0			
1	1	0	0	1			
1	1	0	1	0			
1	1	0	1	1			
1	1	1	0	0			
1	1	1	0	1			
1	1	1	1	0			
1	1	1	1	1			

### 2-bit adder design

*Show for each element and port the chip number and corresponding pin*