

Forrest Knee

ELC 2137

Lab 3. Adders

Pre-Lab Submission Page

Half adder truth table

A	B	C	S	Decimal
0	0	0	0	0
0	1	0	1	1
1	0	0	1	1
1	1	1	0	2

Full adder truth table

C_{in}	A	B	C_{out}	S	Decimal
0	0	0	0	0	0
0	0	1	0	1	1
0	1	0	0	1	1
0	1	1	1	0	2
1	0	0	0	1	1
1	0	1	1	0	2
1	1	0	1	0	2
1	1	1	1	1	3

2-bit adder truth table

C_{in}	A_2A_1	B_2B_1	$C_{out} S_2 S_1$
0	00	00	0 0 0
0	00	01	0 0 1
0	01	01	0 1 0
0	10	01	0 1 1
0	10	10	1 0 0
1	10	10	1 0 1
1	11	11	1 1 1

Decimal equivalent

C_{in}	A	B	Out
0	0	0	0
0	0	1	1
0	1	1	2
0	2	1	3
0	2	2	4
1	2	2	5
1	3	3	7