1) Addition

$A_3 = 1$ $B_3 = 0$
$A_2 = 0$ $B_2 = 1$
$A_1 = 1$ $B_1 = 1$
$A_0 = 1$ $B_0 = 0$

0) $C_{in} = 0$

$+1 \quad +0 \rightarrow S = 1, C_{out} = 0$

1

2) $C_{in} = 1$

$+1 \quad +0 \quad S_2 = 0, C_{out} = 1$

0

1) $C_{in} = 0 \quad S = 1$

$+1 \quad C_{out} = 1$

1

3) $C_{in} = 1 \quad S_2 = 0$

$+0 \quad C_{out} = 1$ overflow

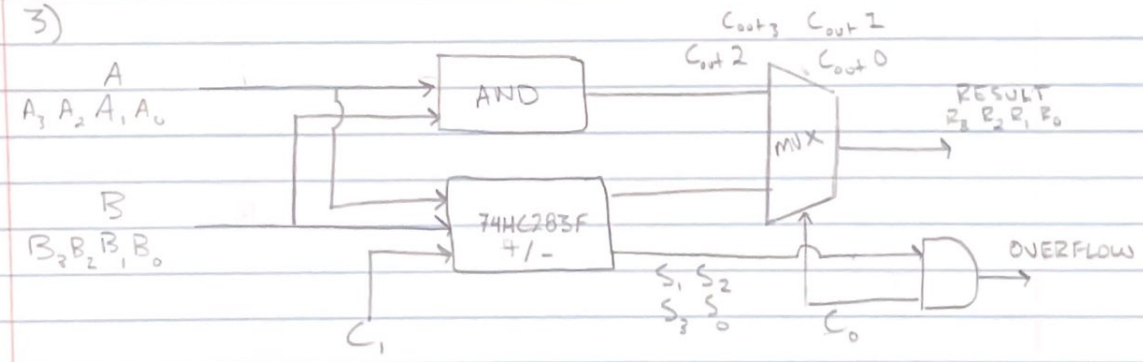
1

0

2)

A	B	S	Y
0	0	0	0
0	1	0	0
1	0	0	1
1	1	0	1
0	0	1	0
0	1	1	1
1	0	1	0
1	1	1	1

3)



4)

C_0	C_1	OPERATION
0	0	AND
0	1	AND
1	0	OR
1	0	NOR