

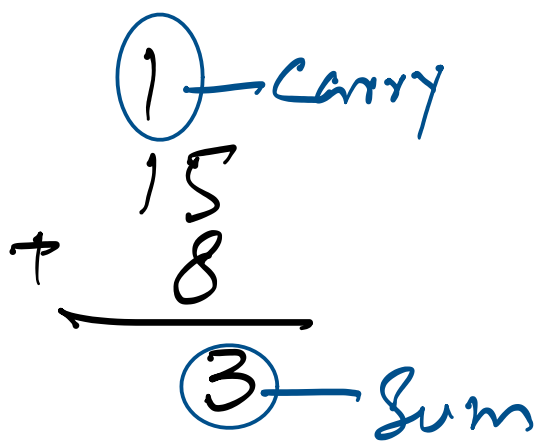
2's Complement & Binary Additions

-128	64	32	16	8	4	2	1
-128							

Range -128 — +127

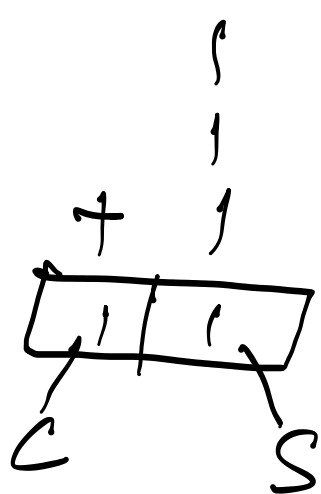
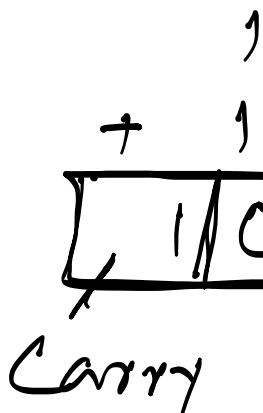
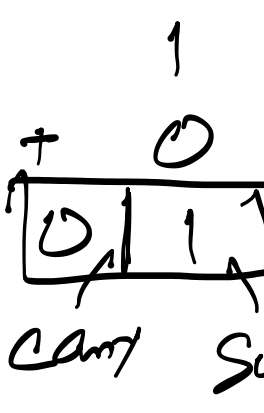
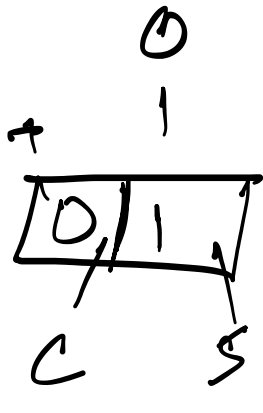
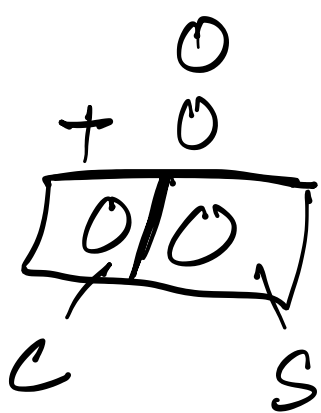
-ve -1									
+ve -0	-128	64	32	16	8	4	2	1	
+8	0	0	0	0	1	0	0	0	
-8	1	1	1	1	1	0	0	0	
-100	1	0	0	1	1	1	0	0	
-6	1	1	1	1	1	0	1	0	
+6	0	0	0	0	0	1	1	0	
+100	0	1	1	0	0	1	0	0	
-29	1	1	1	0	0	0	1	1	
+29	0	0	0	1	1	1	0	1	
-15	1	1	1	1	0	0	0	1	
+15	0	0	0	0	1	1	1	1	
+65	0	1	0	0	0	0	0	1	
-128	1	0	0	0	0	0	0	0	
-1	1	1	1	1	1	1	1	1	

Binary Addition:



2^2 = 4

2	1
C	S
0	0
0	1
1	0
1	1



+5  
+3  
+8

0	0	0	0	0	1	0	1
0	0	0	0	0	0	1	1
0	0	0	0	1	0	0	0

Bitwise op.

+16  
+4  
+20

0	0	0	1	0	0	0	0
0	0	0	0	0	1	0	0
0	0	0	1	0	1	0	0

+10  
-8  
+2

1	0	1	0	1	0	1	0
1	1	1	1	1	0	0	0
1	0	0	0	0	0	1	0

-128 — +127

9th bit drop.  
It has no significance in 8 bits storage.

+120  
+30  
+150

0	1	1	1	1	0	0	0
0	0	0	1	1	1	1	0
1	0	0	1	0	1	1	0

But range

-128  
+22  
-106

-128  
-1  
-129

1	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1
1	0	1	1	1	1	1	1