$v = c_{out} \oplus c_{31}$	1																																		
$carry(c_{out}\cdots c_{00})$	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	unsigned	2's
A[31:0]		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2147483649	-2147483647
B[31:0]		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2147483650	-2147483646
sum[31:0]	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4294967299	-4294967293

Table 1: A: Negative number + negative number with overflow flag (V-flag)

$v = c_{out} \oplus c_{31}$	0																																		
$carry(c_{out}\cdots c_{00})$																														1			0	unsigned	2's
A[31:0]		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	4294967294	-2
B[31:0]																														1			1	4294967294	-1
sum[31:0]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	8589934589	-3

Table 2: B: Negative number + negative number without overflow flag (V-flag)

ı	$v = c_{out} \oplus c_{31}$	1																																			
C	$carry(c_{out}\cdots c_{00})$	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	unsigned	2's	
1	4[31:0]		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1073741824	1073741824	
Ì	B[31:0]		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1073741825	1073741825	
٤	sum[31:0]	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2147483649	2147483649	

Table 3: C: Positive number + positive number with overflow flag (V-flag)

$v = c_{out} \oplus c_{31}$	0																																		
$carry(c_{out}\cdots c_{00})$																																		unsigned	2's
A[31:0]																						0											1	1 1	1
B[31:0]		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	2
sum[31:0]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	3

Table 4: D: Positive number + positive number without overflow flag (V-flag)

$v = c_{out} \oplus c_{31}$	0																																		
$carry(c_{out}\cdots c_{00})$								0																										unsigned	2's
A[31:0]		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
B[31:0]		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2147483650	-2147483646
sum[31:0]	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2147483651	-2147483645

Table 5: E: Positive number + negative number without overflow flag (V-flag)

$v = c_{out} \oplus c_{31}$	0																																			
$carry(c_{out}\cdots c_{00})$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	unsigned	2's	
A[31:0]		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3221225473	-1073741823	
B[31:0]		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	3	
sum[31:0]	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3221225476	-1073741820	

Table 6: Negative number + positive number without overflow flag (V-flag), Worst case propagation delay, C0 is set