Overflow

- When adding 2 n-bit numbers it is possible to get a n+1 bit result if there is a carry out.
- The rule is, if the carry-in to the sign bit position differs from the carry-out position of the sign bit, then an overflow has occurred.

Example 1: Add (+70) to (+80) is:

Carries 0 1 → overflow

+70	0 100 0110
+80	0 101 0000
+150	1 001 0110

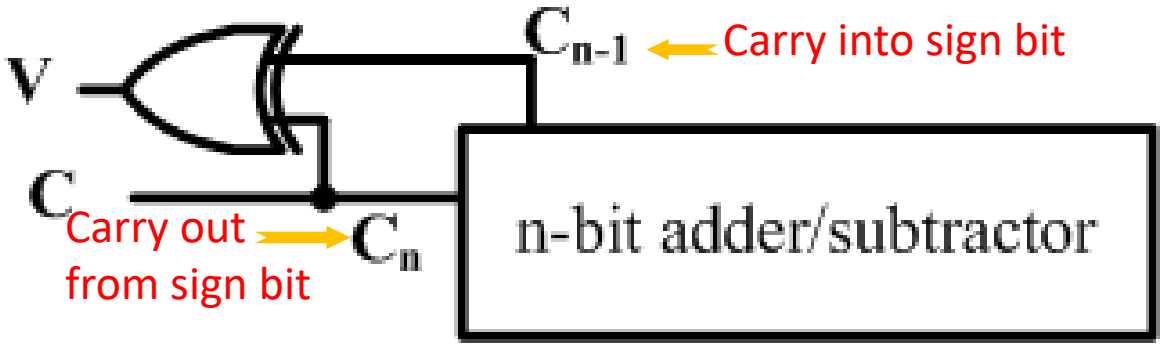
Overflow

Example 2: Add (-70) and (-80)

Carries 1 0 → overflow

-70	1 011 1010
-80	1 011 0000
-150	0 110 1010

- The circuit



If, **V**=1 → overflow

else no overflow