2.6.3 Overflow

Under certain circumstances the result will be wrong! (Continuing with the 2's complement representation.)

Example 2.6.12

0101	*(+5)*
+0011	*(+3)*
1000	*(8) carry into MSB*
	(sign change)??

Example 2.6.13

0101	*(+5)*
+1011	*(-5)*
(1)0000	*(0) carry into MSB + carry*

Example 2.6.14

1011	*(-5)*
+1011	*(-5)*
(1)0110	*(-10) no carry into MSB*
	but carry out of MSB ??

These possible conditions need to be noted if errors are to be avoided.

- The carry bit is implemented as an extra bit used by the processor to record the carry(/borrow) out of the MSB's
- A further bit of information is noted by the processor to determine if an *overflow* or *underflow* condition has occured. A simple rule is applied;