carry from MSB ?	carry into MSB ?	overflow
no	no	no
no	yes	yes
yes	no	yes
yes	yes	no

Exercise 2.6.15 *Multiply +2 by –3 in 3-bit 2's complement binary arithmetic. (Hint: the answer is –6!).*

Exercise 2.6.16 *Show that the 2's complement of –5 is +5.*

2.6.4   Conclusion

2's complement is a natural choice for computation and is for this reason used universally for integer arithmetic in computers.

2.7   Excess-3 and 4221 codes

- There are other codes with interesting and useful properties. Instead of BCD you may occasionally meet XS3 or 4221 codes.

- These have one important feature. The 9's complement (9 - digit) is obtained by taking the 1's complement. This simplifies the arithmetic.

Digit	XS3	4221
0	0011	0000
1	0100	0001
2	0101	0010
3	0110	0011
4	0111	1000
5	1000	0111
6	1001	1100
7	1010	1101
8	1011	1110
9	1100	1111