

## Number Systems

**TABLE I** Converting Hexadecimal to Binary

<i>Hexadecimal</i>	<i>Binary</i>	<i>Decimal</i>
0	0000	0
1	0001	1
2	0010	2
3	0011	3
4	0100	4
5	0101	5
6	0110	6
7	0111	7
8	1000	8
9	1001	9
A	1010	10
B	1011	11
C	1100	12
D	1101	13
E	1110	14
F	1111	15



### Note

Octal numbers are also useful. The octal number system has eight digits, 0 to 7. A decimal number 8 is represented in the octal system as 10.

Here are some good online resources for practicing number conversions:

■ [http://forums.cisco.com/CertCon/game/binary\\_game\\_page.htm](http://forums.cisco.com/CertCon/game/binary_game_page.htm)

■ <http://people.sinclair.edu/nickreeder/Flash/binDec.htm>

■ <http://people.sinclair.edu/nickreeder/Flash/binHex.htm>



MyProgrammingLab™

- 1 Convert the following decimal numbers into hexadecimal and binary numbers:  
100; 4340; 2000
- 2 Convert the following binary numbers into hexadecimal and decimal numbers:  
1000011001; 100000000; 100111
- 3 Convert the following hexadecimal numbers into binary and decimal numbers:  
FEFA9; 93; 2000