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| **course:** | csci 10 |
| **assignment:** | lab 1 |
| **prepared:** | Wed, Jan 29, 2020 // 5:51 pm |

**1. Present the following base-10/decimal value using the notation x*10^n + x*10^n-1 + x*10^n-2... : 1234567**

1*10^6+2*10^5+3*10^4+4*10^3+5*10^2+6*10^1+7*10^0

**2. Present the following base-2/binary value using the notation x*2^n + x*2^n-1 + x*2^n-2... : 0b0011_0011_0011_0011**

0*2^15+0*2^14+1*2^13+1*2^12 + 0*2^11+0*2^10+1*2^9+1*2^8 +
0*2^7+0*2^6+1*2^5+1*2^4 + 0*2^3+0*2^2+1*2^1+1*2^0

**3. Present the following base-16/hexadecimal value using the notation x*16^n + x*16^n-1 + x*16^n-2... : 0xABC**

11*16^2 + 12*16^1 + 13*16^0

**4. Convert the following base-10/decimal value to base-2/binary representation : 43**

0b0010_1011

**5. Convert the following base-10/decimal value to base-2/binary representation : 1492**

0b0101_1101_0100

**6. Convert the following base-10/decimal value to base-16/hexadecimal representation : 1963**

0x7AB

**7. Convert the following base-10/decimal value to base-16/hexadecimal representation : 18**

0x12

**8. Convert the following base-2/binary value to base-16/hexadecimal representation : 0b0001_0001_0001_0001**

0x1111

**9. Convert the following base-16/hexadecimal value to base-2/binary representation : 0x321a**

0b0011_0010_0001_1010

**10. What is true about all following data representations : 1337 (base-10) , 0x0539 (base-16) , 0b0000_0101_0011_1001 (base-2)**

They are equivalent representations of the same quantity in different bases.