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Lab section ___102_____

Lab 4 - Radix Conversion Worksheet

Convert:

1. 0x4F45 into octal
   0x4F45 is base 16 (hex) based on the 0x at the front
   converting it to binary:
   4=>0100
   F=>1111
   4=>0100
   5=>0101
   which is 0100111101000101
   converting to octal:
   000 100 111 101 000 101
   000=>0
   100=>4
   111=>7
   101=>5
   000=>0
   101=>5
   In octal, the number is 47505

2. 269_{10} into radix 7
   269/7 = 38 … 3
   38/7 = 5 … 3
   5/7 = 0 … 5

   In radix 7, the number 269 is 533

3. 110011011110_2 into decimal

1*(2^11)+1*(2^10)+0*(2^9)+0*(2^8)+1*(2^7)+1*(2^6)+0*(2^5)+1*(2^4)+1*(2^3)+1*(2^2)+1*(2^1)+0*(2^0)
=3294

4. $2BD_{19}$ into decimal
   2*(19^2)+B(19^1)+D(19^0)
   B=>11 D=>13
   2*(19^2)+11(19^1)+13(19^0)
   =944

5. Given the following positive binary integer in two's complement: 0101001101011101

   a) Convert the number to hexadecimal:
      0101 0011 0101 1101
      0x535D

   b) Negate the number.
      Invert the number:
      0101001101011101 => 1010110010100010
      add by 1:
      1010110010100011