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Lab 4 - Radix Conversion Worksheet

Convert:

1. 0x4F45 into octal

   $4f45_{16}$ = 0100 1111 0100 0101_2

   0100 1111 0100 $0101_2 = 046505_8$

2. 269_{10} into radix 7

   269/7 = 38 remainder 3
   38/7 = 5 remainder 3
   5/7 = 0 remainder 5
   $269_{10}=533_7$

3. 110011011110_2 into decimal

   $110011011110_2=$

   $2^{11}+2^{10}+2^7+2^6+2^4+2^3+2^2+2^1=2048+1024+128+64+16+8+4+2=3294_{10}$

4. $2BD_{19}$ into decimal

   $2BD_{19}= 2 * 19^2 + 11 * 19^1 + 13 * 19^0 = 944_{10}$

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

    a) Convert the number to hexadecimal:

    0101 0011 0101 1101 = 5 3 5 D = 0x535D

    b) Negate the number.
    0101001101011101 flipped = 1010110010100010+ 1 = negated number 1010110010100011