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section Tuesday 5-6:15

Lab 4 - Radix Conversion Worksheet

Convert:

1. $0x4F45$ into octal
 $0100\ 1111\ 0100\ 0101_2$
 $0\ 100\ 111\ 101\ 000\ 101_2$
 048505_8
2. 269_{10} into radix 7
 $269/7 = 38$
 $269\%7 = 3$
 $38/7 = 5$
 $38\%7 = 3$
 $5/7 = 0$
 $5\%7 = 5$
 533_7
3. 110011011110_2 into decimal
 $2048 + 1024 + 0 + 0 + 128 + 64 + 0 + 16 + 8 + 4 + 2 + 0 = \mathbf{3294_{10}}$
4. $2BD_{19}$ into decimal
 $2(19^2) + 11(19^1) + 13(19^0) = \mathbf{944_{10}}$
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.
 $1010\ 1100\ 1010\ 0010$

$$\begin{array}{r} 1010\ 1100\ 1010\ 0010 \\ + 1 \\ \hline \mathbf{1010\ 1100\ 1010\ 0011_2} \end{array}$$