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## Lab 4 - Radix Conversion Worksheet

Convert:

1.  $0x4F45$       into octal      **47505**  
 $= 100111101000101$  Binary  
 $= 20293 \rightarrow 20293/8 = 2536 \text{ remainder } 5$   
 $= 2536/8 = 317 \text{ remain } 0$   
 $= 317/8 \text{ r}5$   
 $= 39/8 \text{ r}7$   
 $= 4/8 \text{ r}4$   
 $= 47505$
2.  $269_{10}$       into radix 7      **533**  
 $= 269/10 \rightarrow 38 \text{ r}3$   
 $= 38/7 \rightarrow 5 \text{ r}3$   
 $= 5/7 \rightarrow 0 \text{ r}5$
3.  $110011011110_2$       into decimal      **3294**  
 $= 2^1 + 2^2 + 2^3 + 2^4 + 2^6 + 2^7 + 2^{10} + 2^{11}$   
 $= 3294$
4.  $2BD_{19}$       into decimal      **944**  
 $= (2 \cdot 19^2) + (11 \cdot 19^1) + (13 \cdot 19^0)$   
 $= 944$
5. Given the following positive binary integer in two's complement:  
 $0101001101011101$ 
  - a) Convert the number to hexadecimal:  
 $0101 \ 0011 \ 0101 \ 1101$   
**535D**
  - b) Negate the number.  
 $1010 \ 1100 \ 1010 \ 0010 + 1 = 1010 \ 1100 \ 1010 \ 0011$