1. Convert the following binary number to hexadecimal.

101101011110101111 = 00101101011110101111 = 2D7AF (BASE 16)

1. Convert the following number to binary.

0110 = 6, 1000 = 8, 1001 = 9, 1101 = D, 1110 = E, 1111 = F, 0011 = 3

33F6D9E2 = 0011-0011-1111-0110-1101-1001-1110-0010 (BASE 2)

1. How many digits are required to display the following decimal number in binary?

1024

2^0, 2^1, 2^2, 2^3 ,2^4, 2^5, 2^6, 2^7, 2^8, 2^9, 2^10

STARTING WITH THE NUMBER 0 TO 10 = 11 DIGITS

1. Convert the following number to decimal showing how you did it.

3 = 0011, 6 = 0110, 1111 = F.

6F3 => 011011110011 (BASE 2) => 1779 (BASE 10)

~~(0X2^11)~~+(1X2^10)+(1X2^9)+~~(0X2^8)~~+(1X2^7)+(1X2^6)+(1X2^5)+(1X2^4)+~~(0X2^3)~~+~~(0X2^2)~~+(1X2^1)+(1X2^0)= 1024+512+128+64+32+16+2+1=1779

1. Convert the following number to binary, then to hexadecimal, and show how you did it.

279 => 100010111 (BASE 2) => 000100010111 (BASE 2) = 117 (BASE 16)

279/2=139 1

I ADDED 000 TO CALCULATE HEX:

0001=1

0111=7

139/2=69 1

69/2=34 1

34/2=17 0

17/2=8 1

8/2=4 0

4/2=2 0

2/2=1 0

1/2=0 1