

bits in a byte?

8

in a nibble?

4

Binary	Decimal	Hexadecimal
0000	0	0
0001	1	1
0010	2	2
0011	3	3
0100	4	4
0101	5	5
0110	6	6
0111	7	7
1000	8	8
1001	9	9
1010	10	A
1011	11	B
1100	12	C
1101	13	D
1110	14	E
1111	15	F

- with hex you can always store a nibble's worth of binary data in one character

1101 0111 0101 1111

0x D 7 5 F

~~decimal~~?

a b c d bits

$$a2^3 + b2^2 + c2^1 + d2^0$$

0 0 1 0

$$\cancel{0(2^3)} + \cancel{0(2^2)} + 1(2^1) + \cancel{0(2^0)}$$

2