

Decimal	Binary	Hexadecimal
0	0	0
1	1	1
2	10	2
3	11	3
4	100	4
5	101	5
6	110	6
7	111	7
8	1000	8
9	1001	9
10	1010	A
11	1011	B
12	1100	C
13	1101	D
14	1110	E
15	1111	F
16	10000	10
17	10001	11
....
31	11111	1F
32	100000	20

Rule: $2^n = \text{b}100000\dots0$, (1 followed by n 0's)

Rule: $2^n - 1 = \text{b}11111\dots1$, (n 1's)