10.0.0.0/30

255	0	0	0
2^7 2^6 2^5 2^4 2^3 2^2 2^1 2^0	2^7 2^6 2^5 2^4 2^3 2^2 2^1 2^0	2^7 2^6 2^5 2^4 2^3 2^2 2^1 2^0	2^7 2^6 2^5 2^4 2^3 2^2 2^1 2^0
1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0

HOW TO FIND THE NUMBER OF NETWORK

2^n (Here, n indicated total number of bits borrowed from host)

2^{22} = 41,94,304 (You can create 41,94,304 networks)

HOW TO FIND THE NUMBER OF IP ADDRESS ON EACH NETWORK

2^n (Here, n indicated total number of remaining host bits)

2^2 = 4 (On each network you will have only 4 IP Address)

HOW TO FIND THE NUMBER OF HOSTS IN EACH NETWORK

2^n - 2 (Here, n indicated total number of remaining host bits)

2^2 - 2 = 2 (You will have only two Host IP Address on each network)

NOTE:

On every network, first IP Address is a **network ID** and Last IP Address is a **broadcast ID**.

10.0.0.0/30

Total No of Networks: 41,94,304 | IP Address: 4

Network Number	Network ID	Host IP Address	Broadcast Address
1	10.0.0.0	10.0.0.1 – 10.0.0.2	10.0.0.3
2	10.0.0.4	10.0.0.5 – 10.0.0.6	10.0.0.7
3	10.0.0.8	10.0.0.9 – 10.0.0.10	10.0.0.11
4	10.0.0.12	10.0.0.13 – 10.0.0.14	10.0.0.15
5	10.0.0.16	10.0.0.17 – 10.0.0.18	10.0.0.19
6	10.0.0.20	10.0.0.21 – 10.0.0.22	10.0.0.23
7	10.0.0.24	10.0.0.25 – 10.0.0.26	10.0.0.27
8	10.0.0.28	10.0.0.29 – 10.0.0.30	10.0.0.31
9	10.0.0.32	10.0.0.33 – 10.0.0.34	10.0.0.35
10	10.0.0.36	10.0.0.37 – 10.0.0.38	10.0.0.39
11	10.0.0.40	10.0.0.41 – 10.0.0.42	10.0.0.43