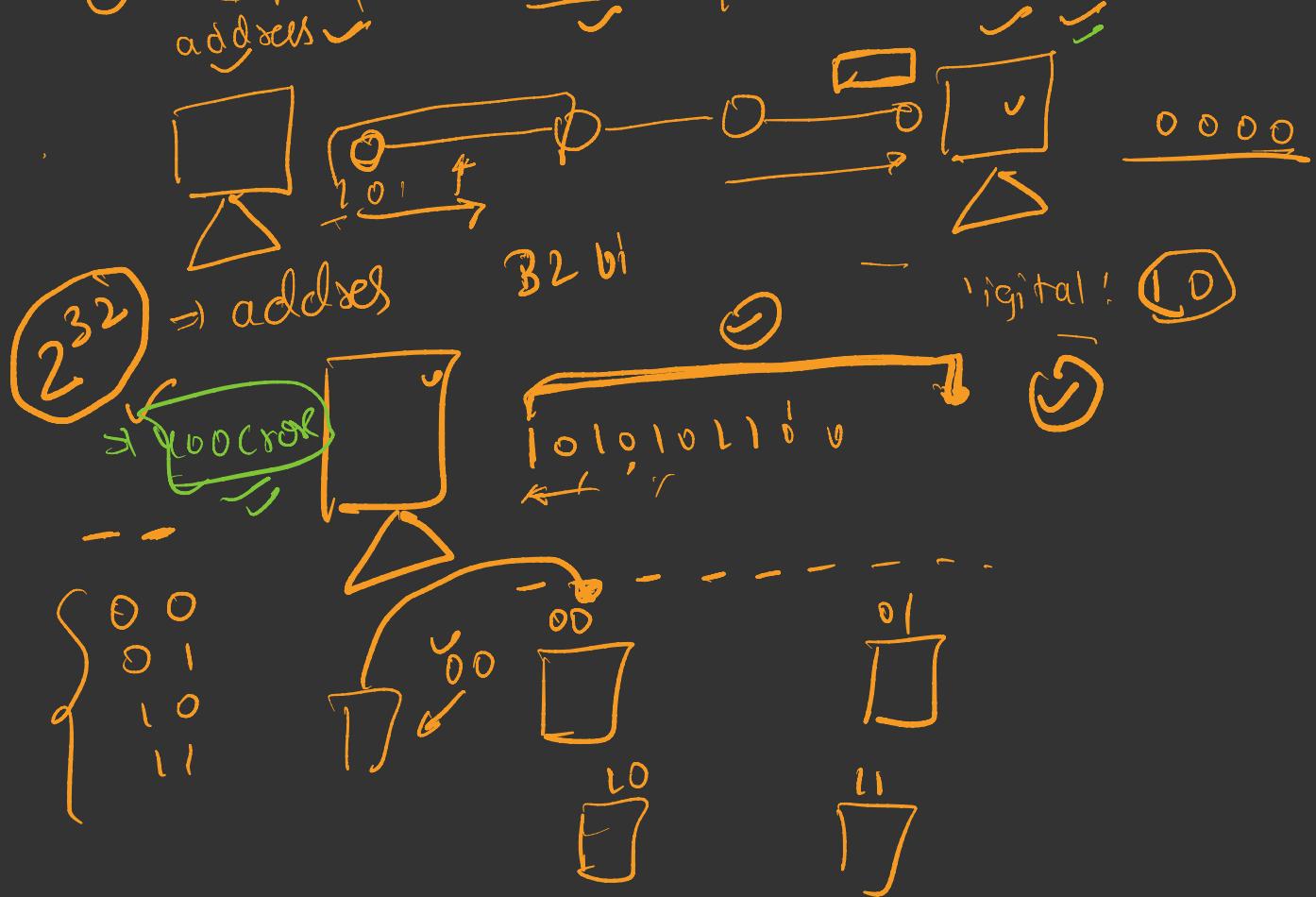



① IPv4 : 32 bit } standard
address



IPV6: 128 bits ✓

IPV6 \Downarrow
 2^{128} ✓

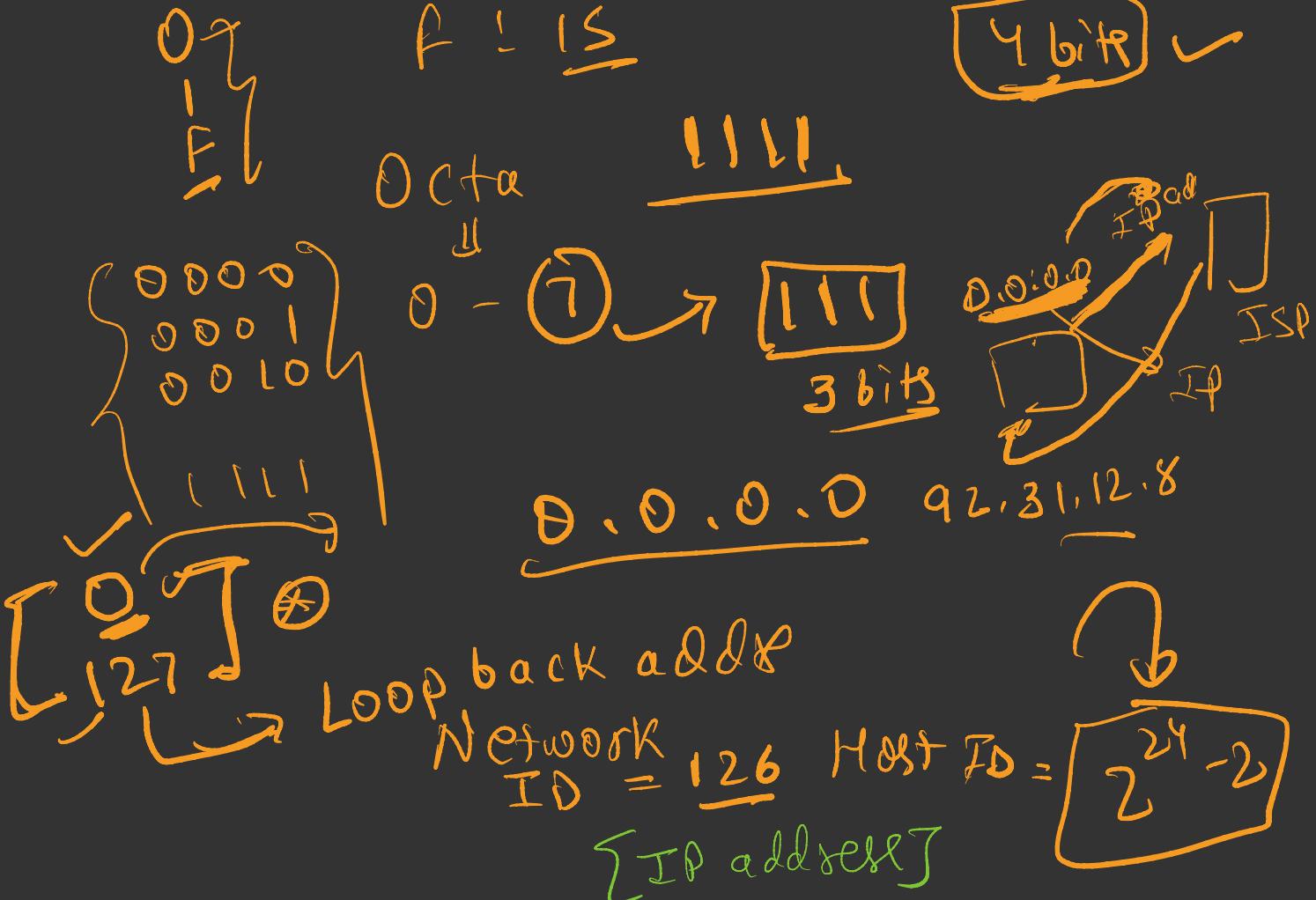
Hexdecimal = 0-F ✓

32
↓
64 ✓
128 bits 8

0000 : 0000 : 0000 : 0000 : 0000 : 0000 : 0000 : 0000
FFFF : FFFF

$$16 \times 8 = 128 \text{ bits}$$

01011101010 - - - 1



Class A: $[1-126]$ — . — . — ¹⁶
 Class B: $128-191$, — . — . — ³²
 Class C: $192-223$, — . — . — ⁴⁸
 Class D: $224-239$, — . — . — ⁶⁴
 Class E: $240-255$, — . — . — ¹²⁸
 Host IP
 Network IP
 Binary

Class A: — : - . - . →

Class B : 10 ----- . . .

$$2^6 = \boxed{64}$$

$\begin{cases} 10\ \underline{0\ 0\ 0\ 0\ 0\ 0} = 128 \\ 10\ \underline{1\ 1\ 1\ 1\ 1\ 1} = 191 \end{cases}$ Class B !

$\begin{cases} \underline{1\ 1\ 1\ 1\ -\ -\ -} \\ \underline{1\ 1\ 1\ 1\ 0\ 0\ 0\ 0} = 240 \\ \underline{1\ 1\ 1\ 1\ 1\ 1\ 1\ 1} = 255 \end{cases}$

Class C : 110 ----- . . .

$$2^5 = \boxed{32}$$

$\begin{cases} 110\ \underline{0\ 0\ 0\ 0\ 0} = 192 \\ 110\ \underline{1\ 1\ 1\ 1\ 1} = 223 \end{cases}$

$$2^4 = \underline{16}$$

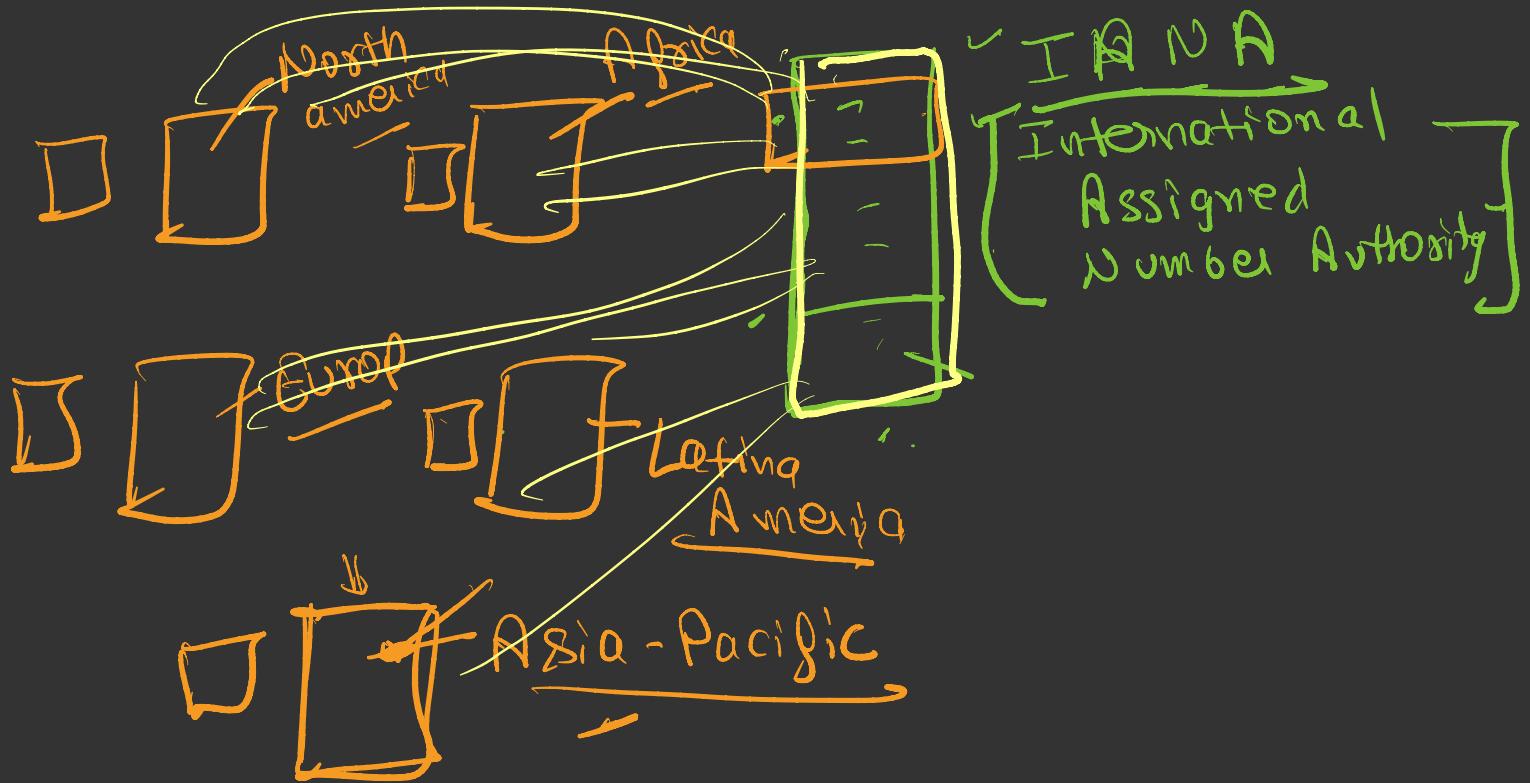
Class D : 1110 ----- . . .

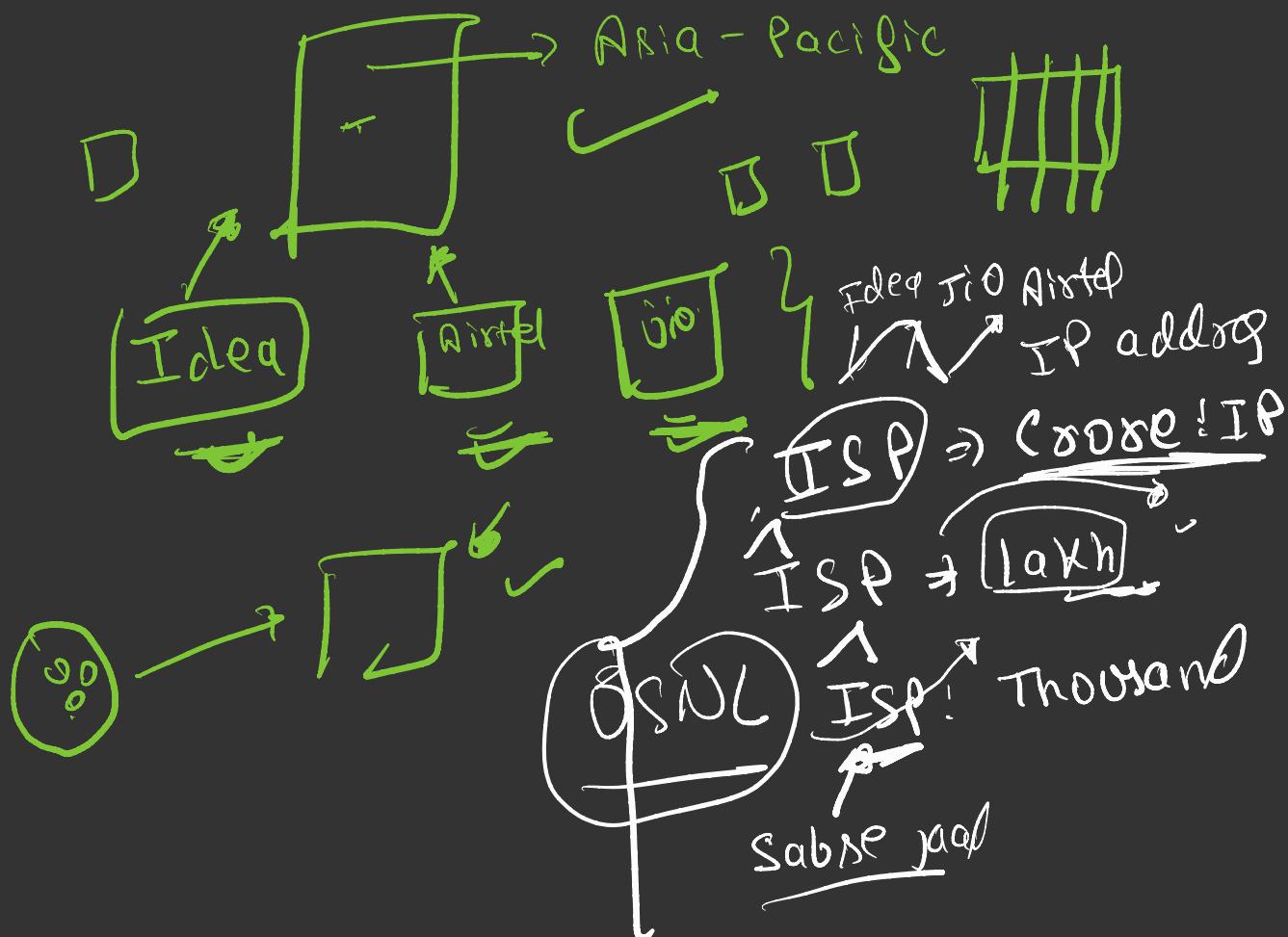
$$1110\ \underline{0\ 0\ 0\ 0} = 224$$

$$1110\ \underline{1\ 1\ 1\ 1} = 239$$

Class A :	0	✓
Class B :	<u>10</u>	✓
Class C :	1 1 0	✓
Class D :	1 1 1 0	✓
Class E :	1 1 1	✓

1 1 0





Meaning
full

Idea : 2 crore

Jio : 3 crore

Airtel : 2 crore

AP : 5 lakh

X : 50K

Y : 10K

IP

ELCOS

1.5 crore

86.0.0.0

86.255.255.255

1.67 cr

✓ [73.0.0.0]
✓ [73.255.255.255]

Tere hal

\sum^{24}

$2^{24} \Rightarrow$ address

1.67 crore

Class A !

To Coore
SF

Class A: 0-127, ..., -1

Network ID

Holt ID

$$\frac{0 - 127}{128}$$

128

Idea 8 bit → 24 →

Idea 8 bit + 24 →
1.67 crore ⇒ IP address

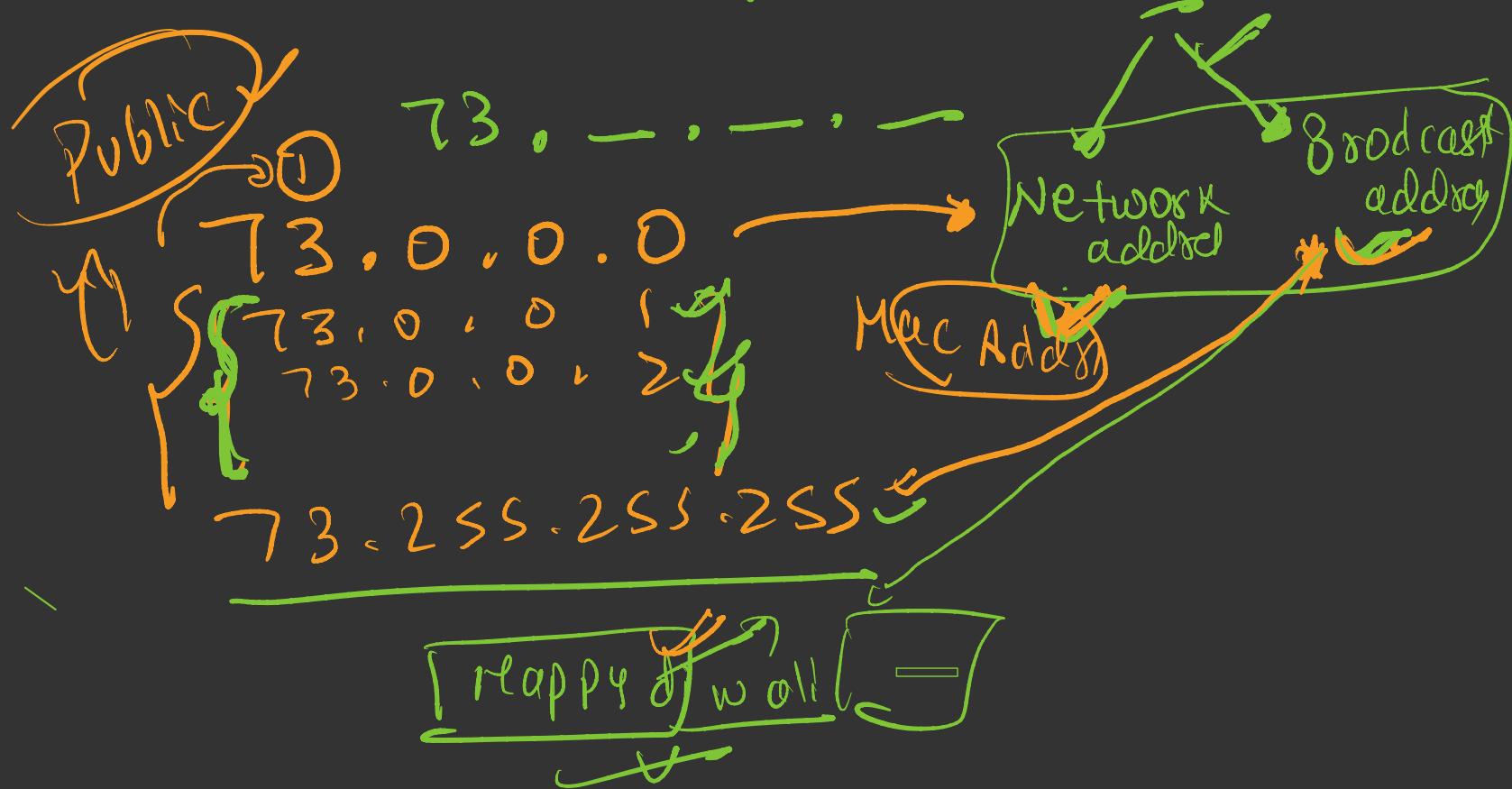
1.62 cos ⇒ IP address
0 ----- 2

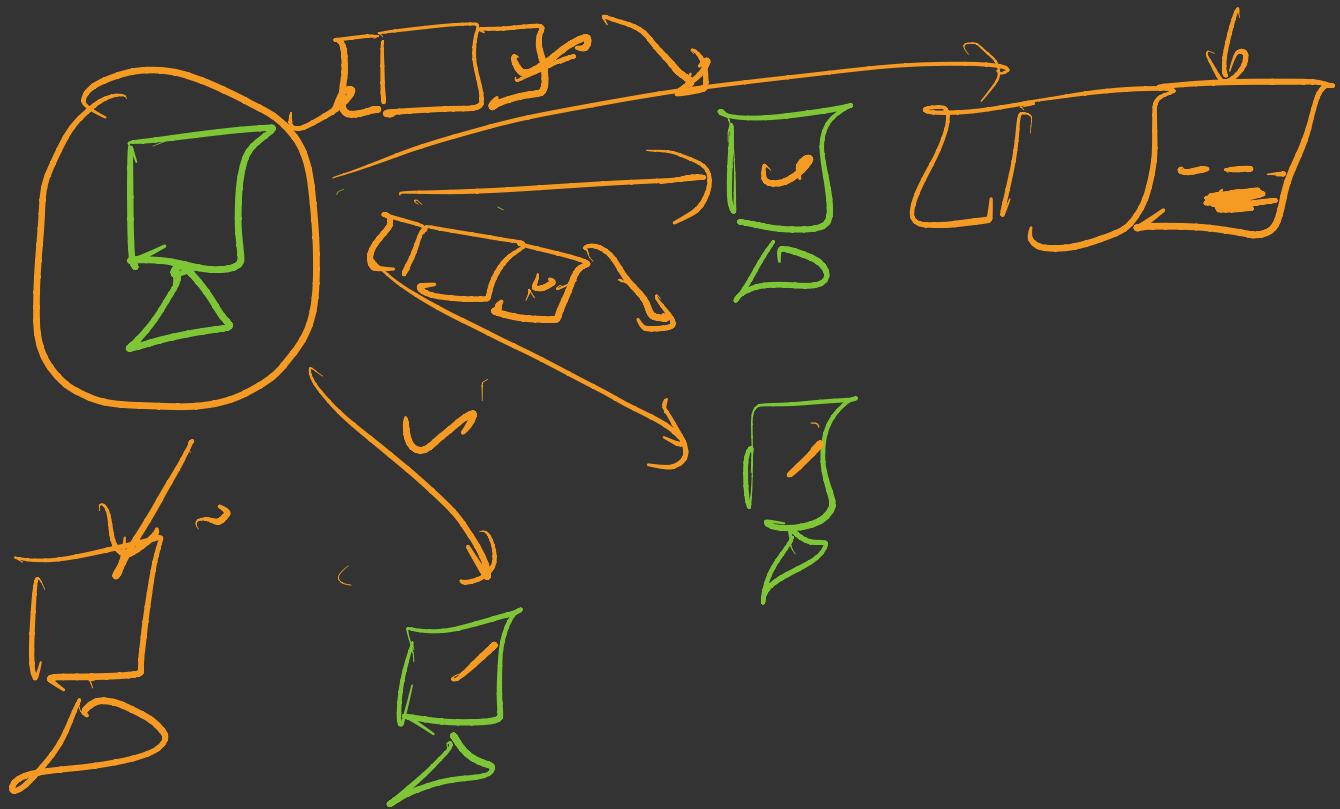
$$2^7 = \boxed{128}$$

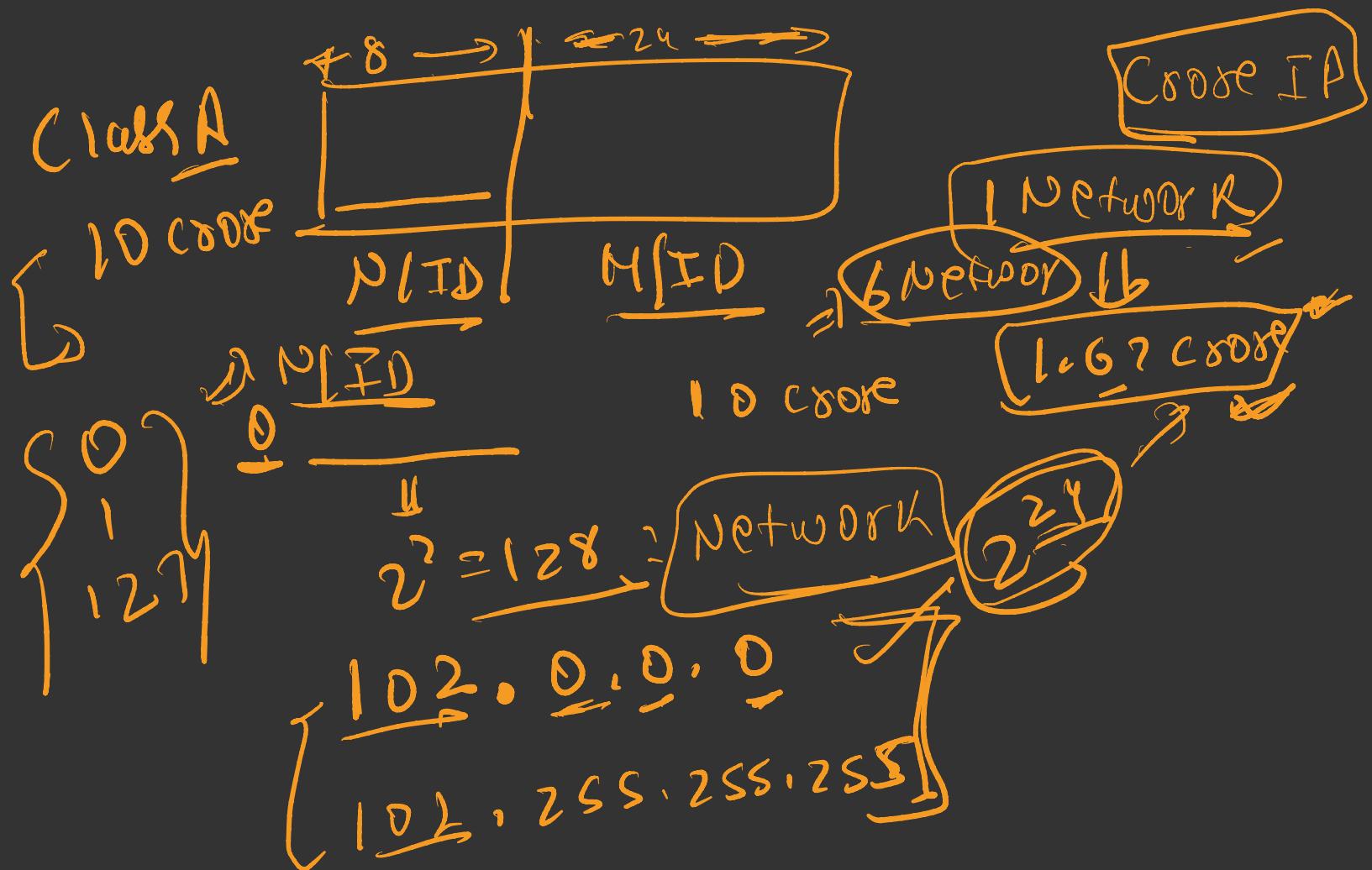
Network

73.0.0.0
73.255.255.255

$$\text{Host ID} = 2^{24} - 2$$





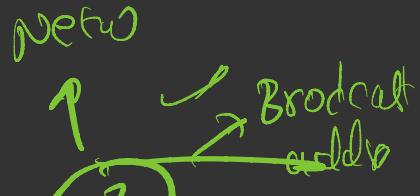
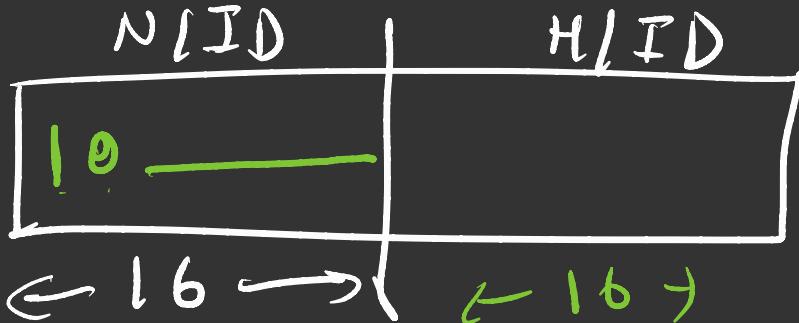


$2^3 = 8$

$8 \sim$

1	-	-	-
0	0	0	0
0	0	0	1
1	0	1	0
1	0	1	1
1	1	1	1
1	1	1	1

Class D:

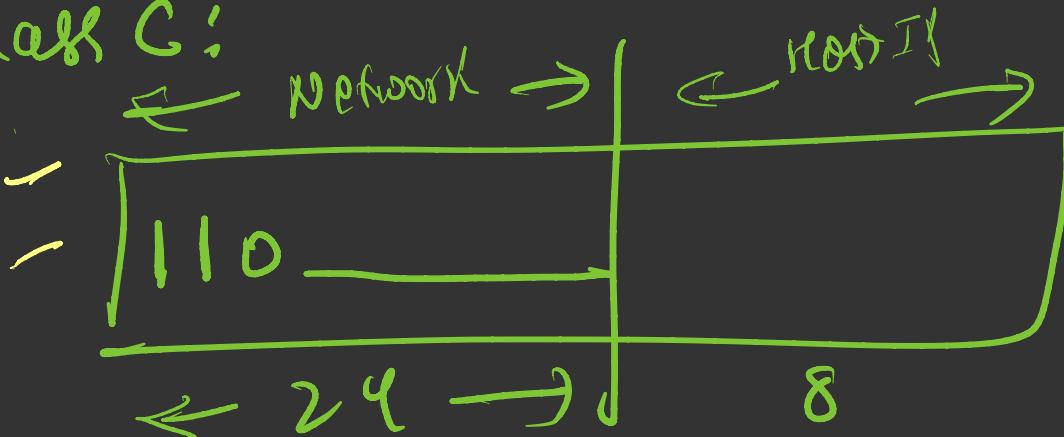


NID: 2^{14}
Host ID: 2^1
1024 = 2^{10}

2^{21}
 2^{12}
 2^{13}
 2^{14}

Host ID: 2^1
1 - 10Kw
2 - GSK

Class C:



Network: 2^{21}

Host: $2^8 - 2$

$: 2^{54}$

4 Networks! 1016 IP

Class

1 - 126

TSP



2^7 Network

126 network

] \rightarrow IP address

6SK

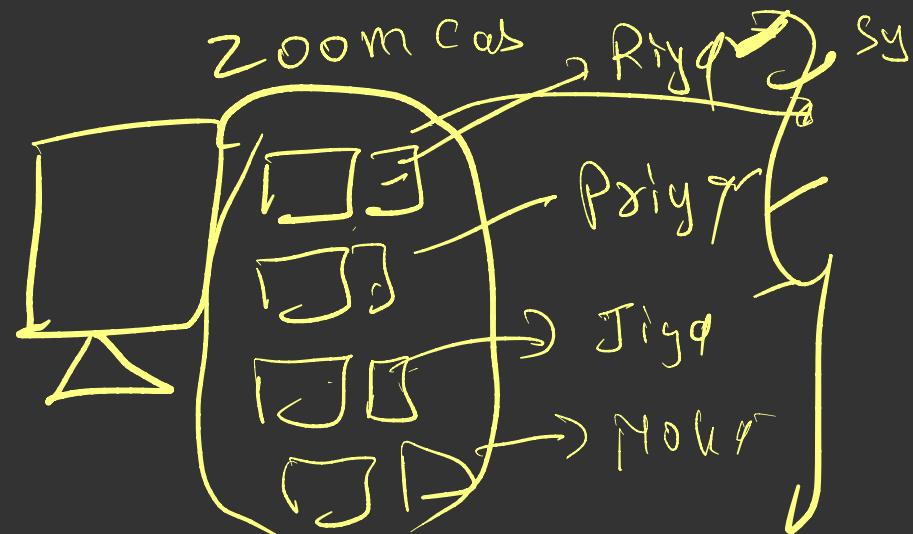
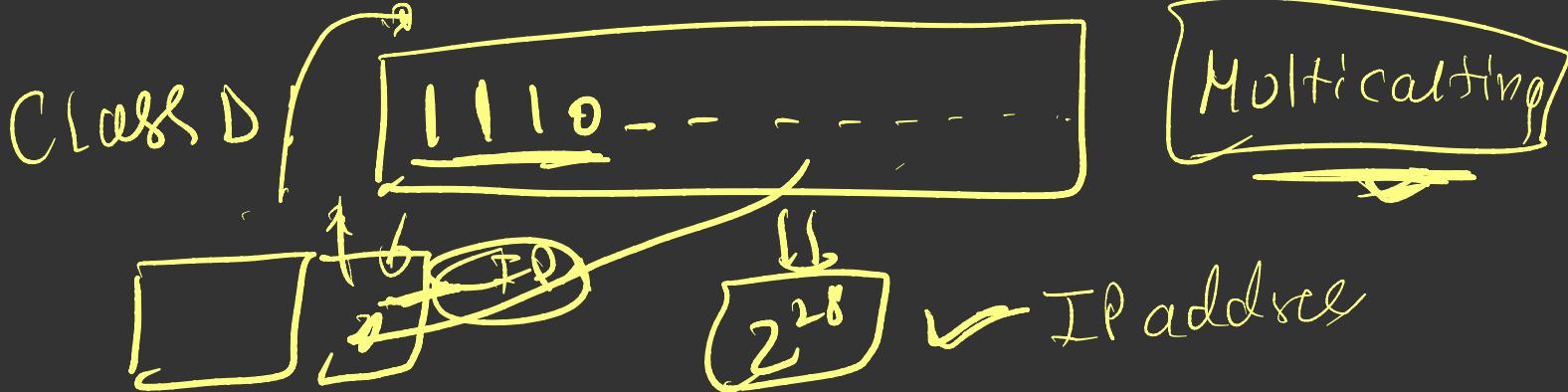
2 lakh IP

8.0.0.0

8.255.255.255

$31 \times 6SK$

260 IP



Class E: [|||| - - - - -]

[1] $2^{28} \rightarrow$ Reserve for future use]

