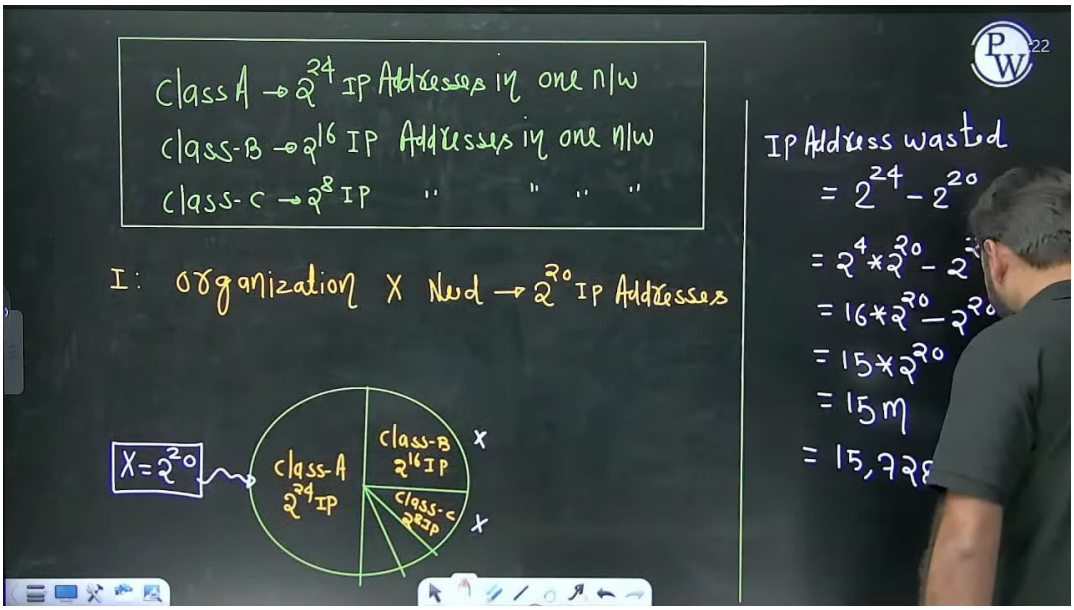
View, add and edit your notes in the app

L3

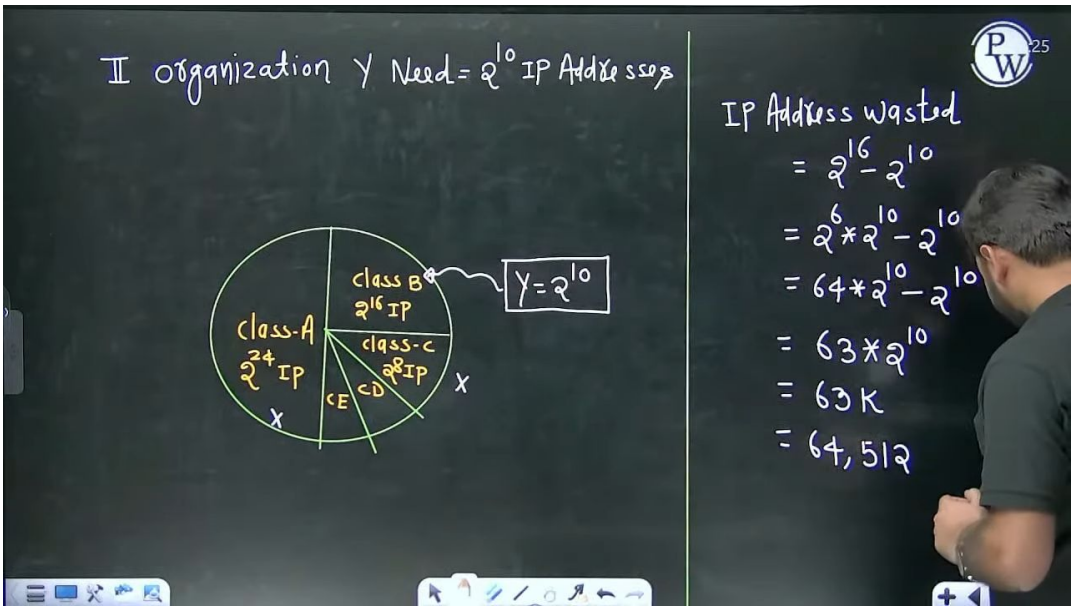
Generated on October 19, 2024

Summary

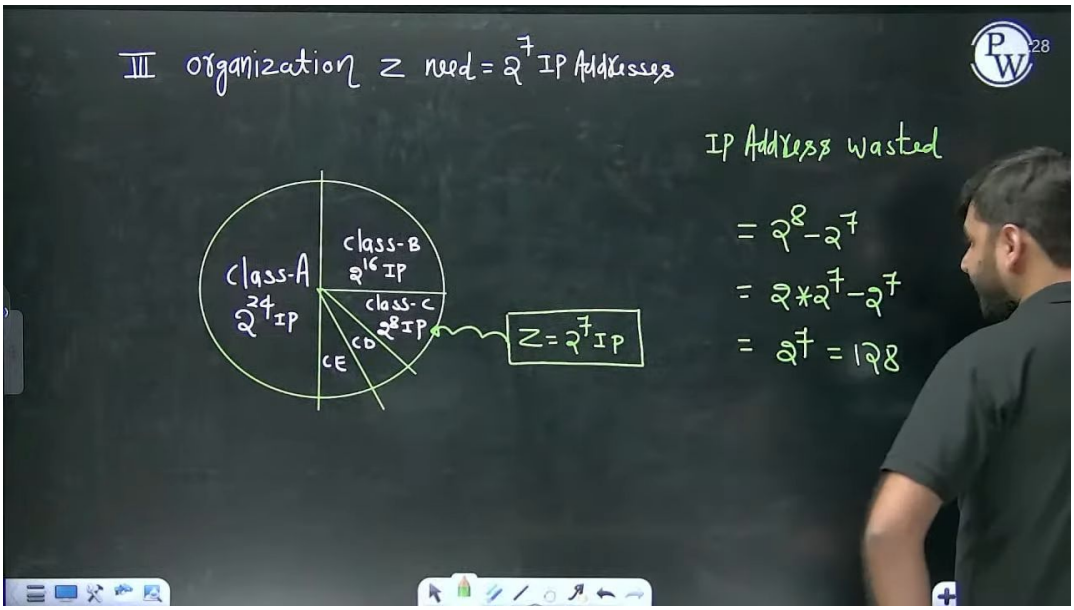
AI Notes	AI Slides	Text Notes	Screenshots
0	0	0	29



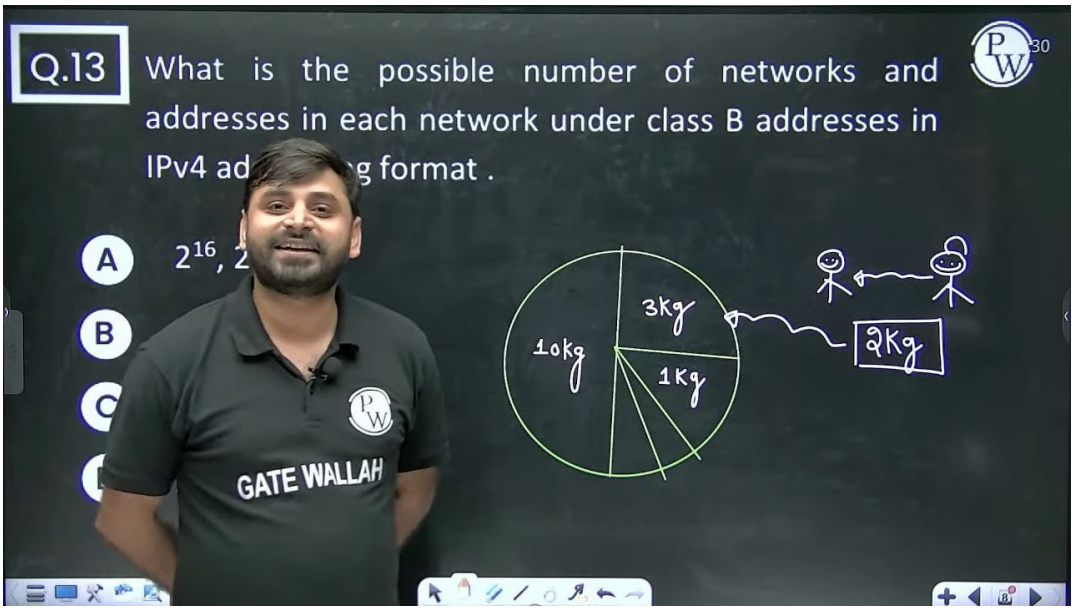
19:39


II organization Y Need = 2^{10} IP Addresses
class B 2^{16} IP
Y = 2^{10}
class-A 2^{24} IP
class-C 2^8 IP
CE
CD
X
X
IP Address wasted
$= 2^{16} - 2^{10}$
$= 2^6 * 2^{10} - 2^{10}$
$= 64 * 2^{10} - 2^{10}$
$= 63 * 2^{10}$
$= 63K$
$= 64,512$
25

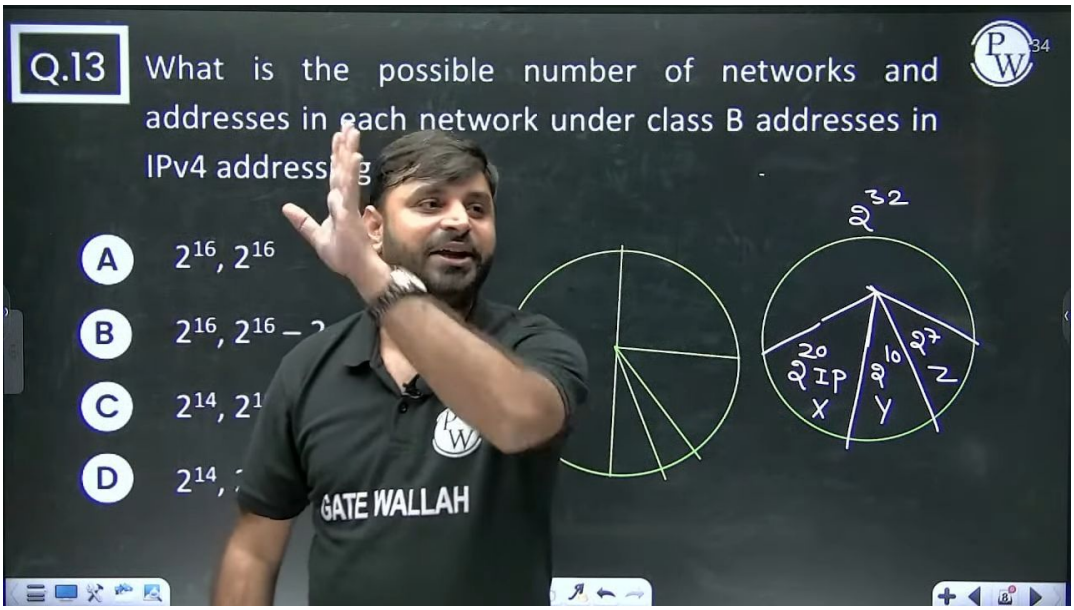
22:54


III organization Z need = 2^7 IP Addresses
class-B 2^{16} IP
class-A 2^{24} IP
class-C 2^8 IP
CD
CE
Z = 2^7 IP
IP Address wasted
$= 2^8 - 2^7$
$= 2 * 2^7 - 2^7$
$= 2^7 = 128$
28

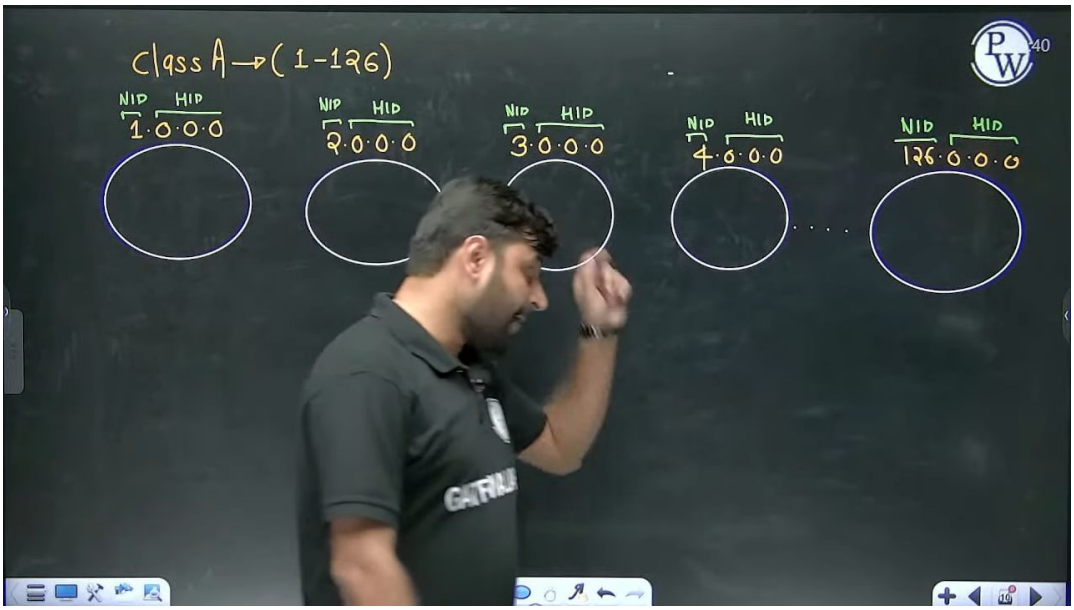
25:41


Q.13
What is the possible number of networks and addresses in each network under class B addresses in IPv4 ad g format .
A
B
C
3kg
10kg
1kg
2kg
GATE WALLAH

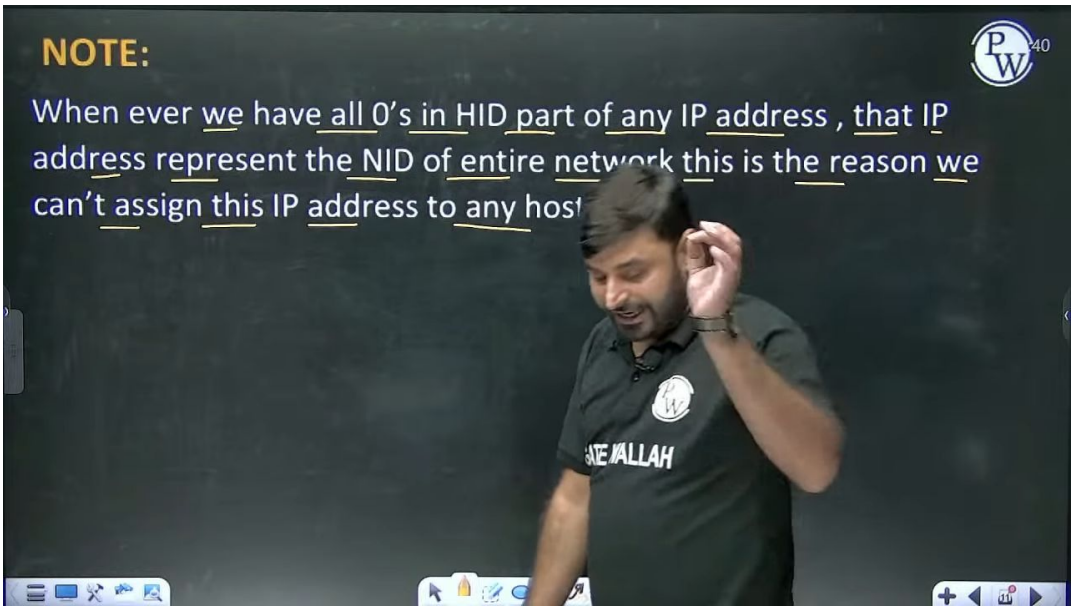
28:14


Q.13
What is the possible number of networks and addresses in each network under class B addresses in IPv4 address g
A
B
C
D
GATE WALLAH

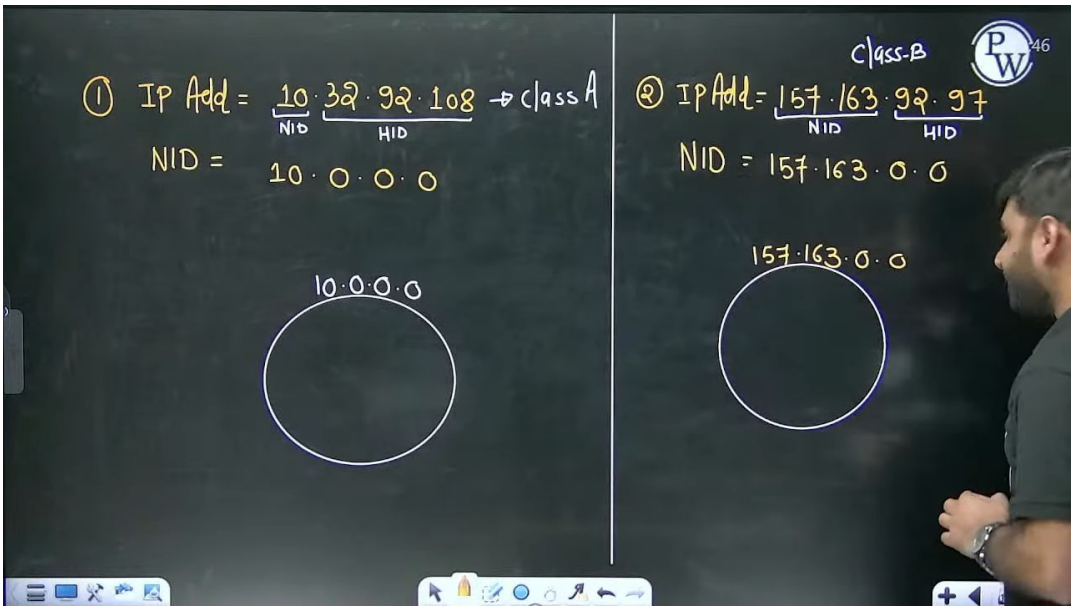
31:52


Class A → (1-126)
NID HID
1.0.0.0
NID HID
2.0.0.0
NID HID
3.0.0.0
NID HID
4.0.0.0
NID HID
126.0.0.0

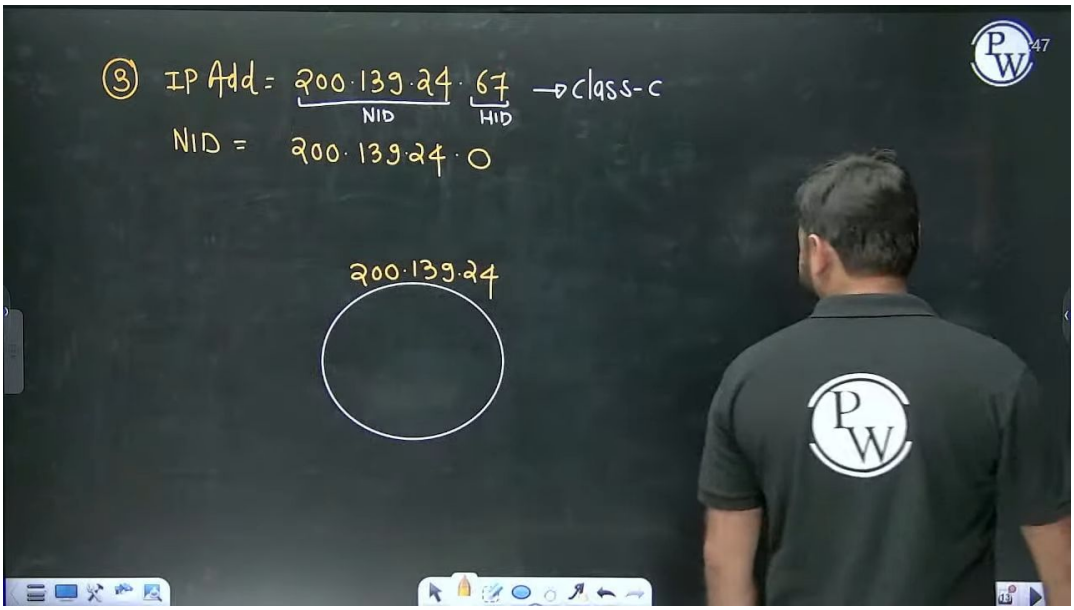
37:50


NOTE:
When ever we have all 0's in HID part of any IP address , that IP address represent the NID of entire network this is the reason we can't assign this IP address to any host

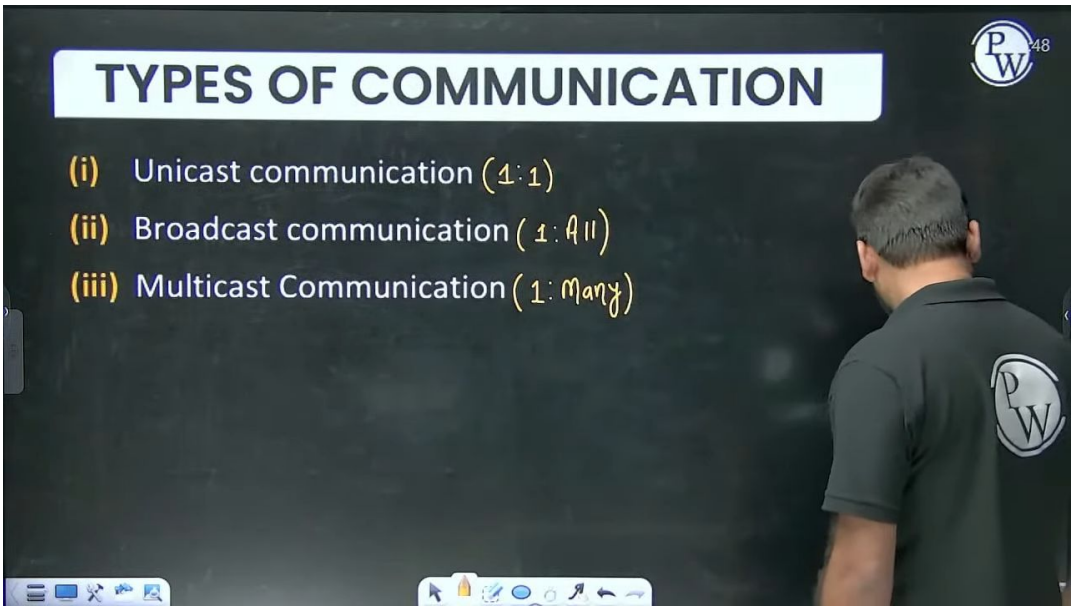
38:20


① IP Add = 10 · 32 · 92 · 108 → class A
NID
HID
NID = 10 · 0 · 0 · 0
10.0.0.0
② IP Add = 157 · 163 · 92 · 97
Class-B
NID
HID
NID = 157 · 163 · 0 · 0
157.163.0.0
46

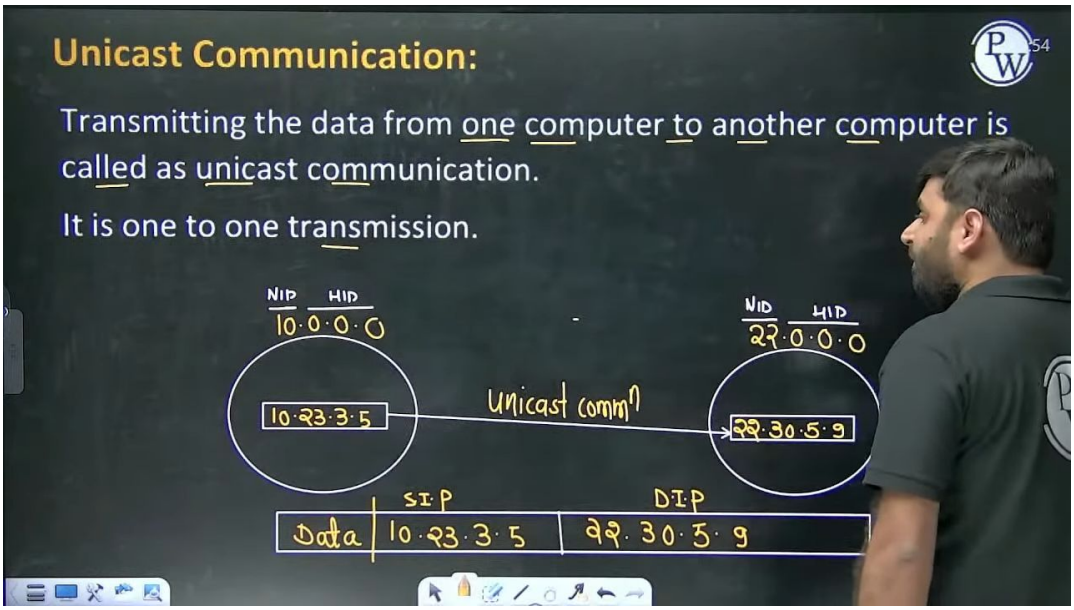
43:45


③ IP Add = 200 · 139 · 24 · 67 → class-C
NID
HID
NID = 200 · 139 · 24 · 0
200.139.24
47

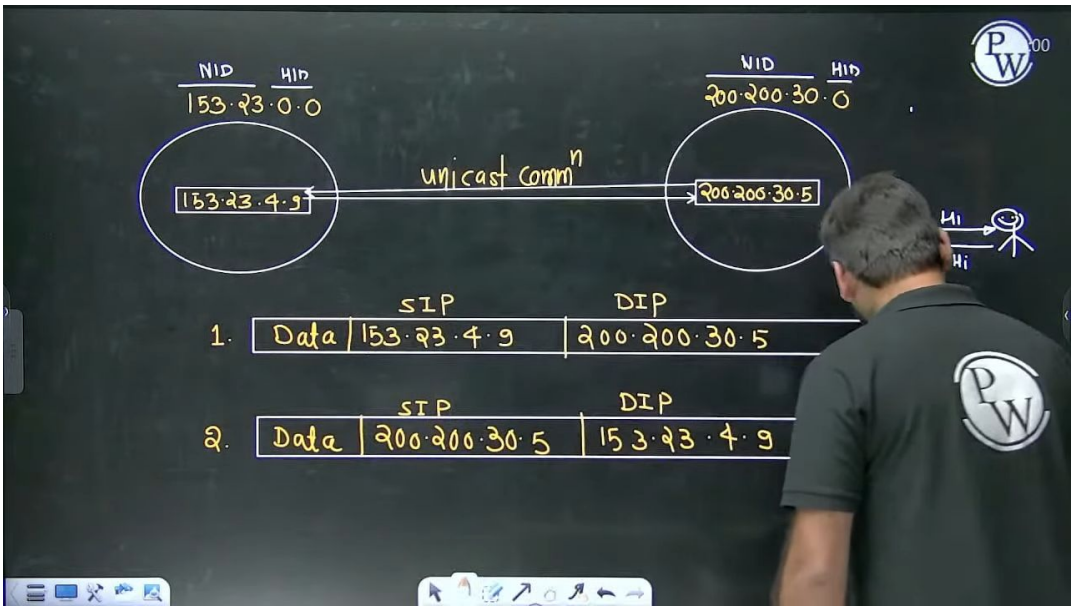
45:17


TYPES OF COMMUNICATION
(i) Unicast communication (1:1)
(ii) Broadcast communication (1:All)
(iii) Multicast Communication (1:Many)

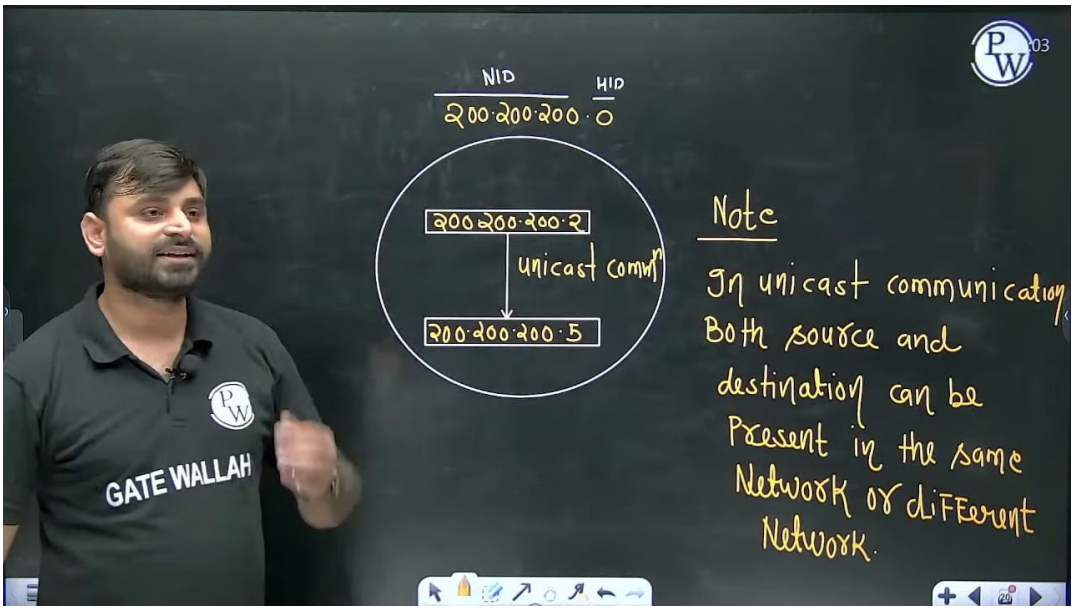
46:04


Unicast Communication:
Transmitting the data from one computer to another computer is called as unicast communication.
It is one to one transmission.
NIP HID
10.0.0.0
NID HID
22.0.0.0
10.23.3.5
Unicast comm
22.30.5.9
SIP
DIP
Data
10.23.3.5
22.30.5.9

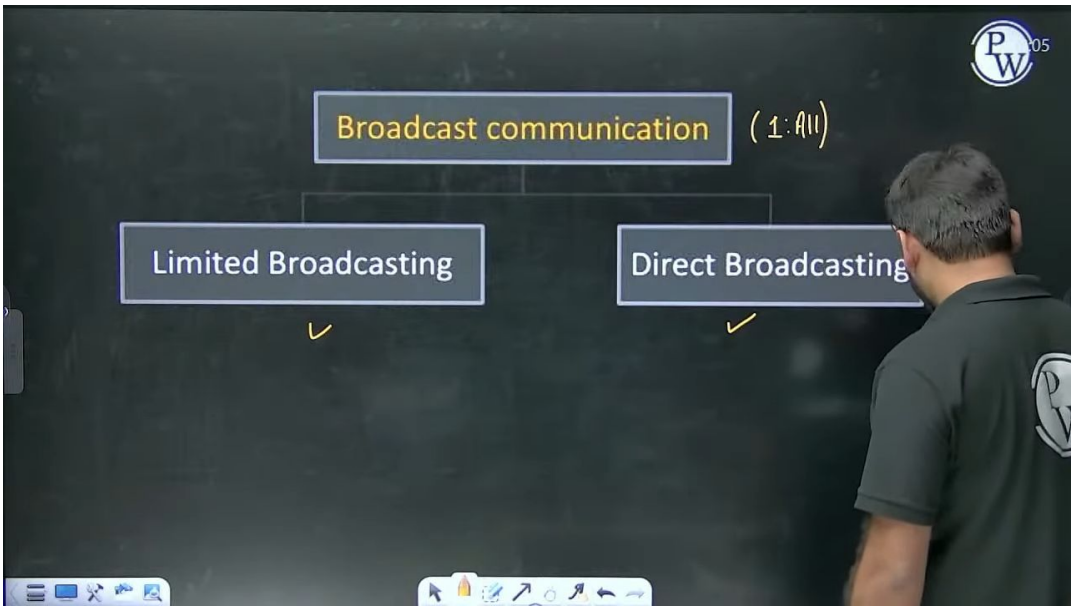
51:28


NID
HID
153·23·0·0
NID
HID
200·200·30·0
unicast comm^n
153·23·4·9
200·200·30·5
Hi
Hi
SIP
DIP
1. Data 153·23·4·9 200·200·30·5
SIP
DIP
2. Data 200·200·30·5 153·23·4·9

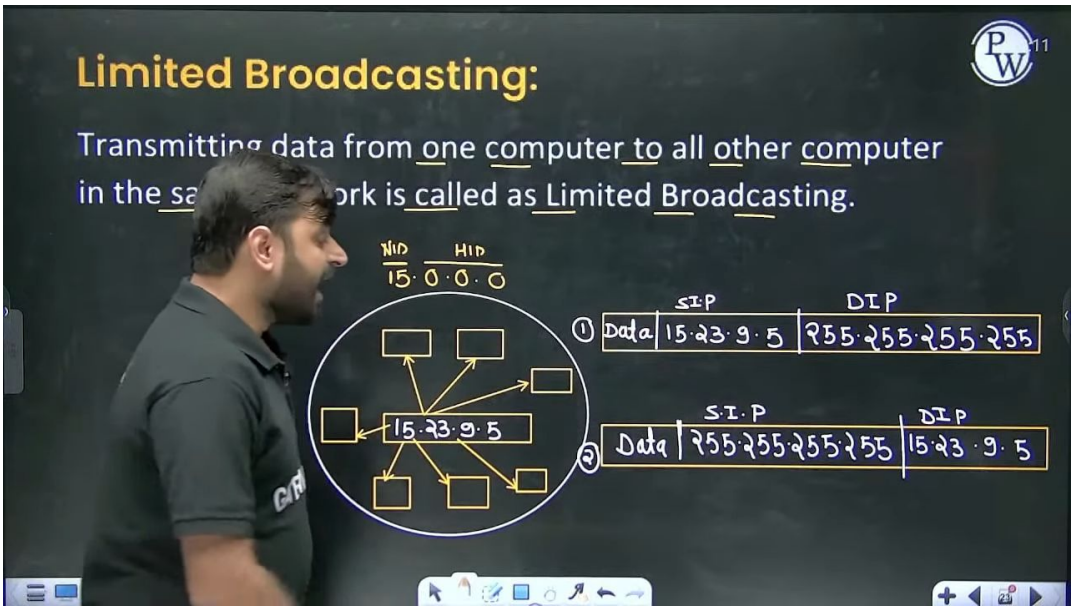
58:08


NID
HID
200·200·200·0
200·200·200·2
unicast comm^n
200·200·200·5
GATE WALLAH
Note
In unicast communication
Both source and
destination can be
Present in the same
Network or different
Network.

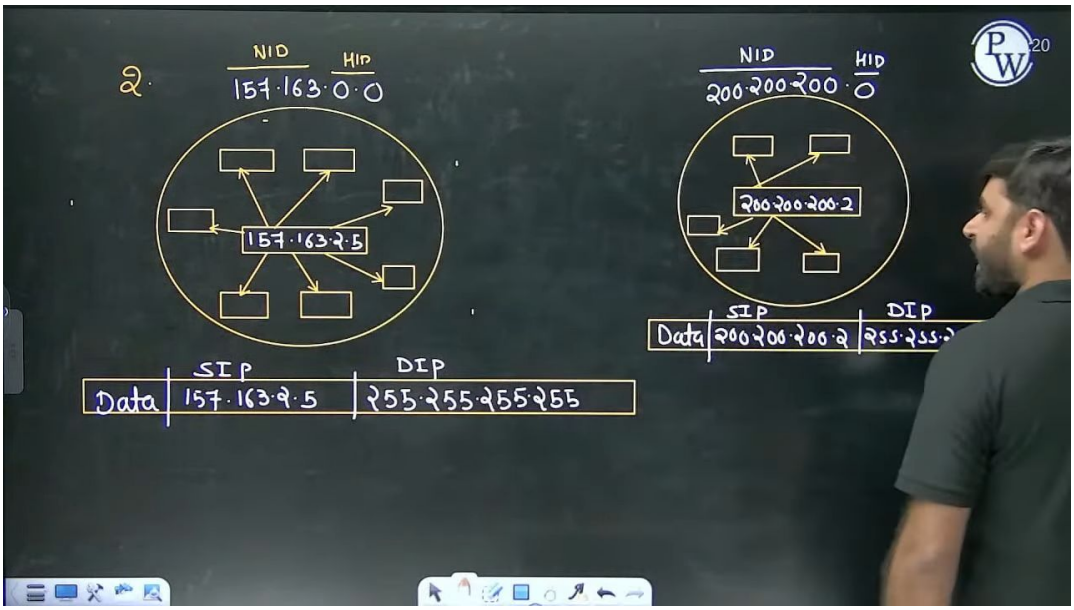
1:01:20


Broadcast communication
(1:All)
Limited Broadcasting
Direct Broadcasting

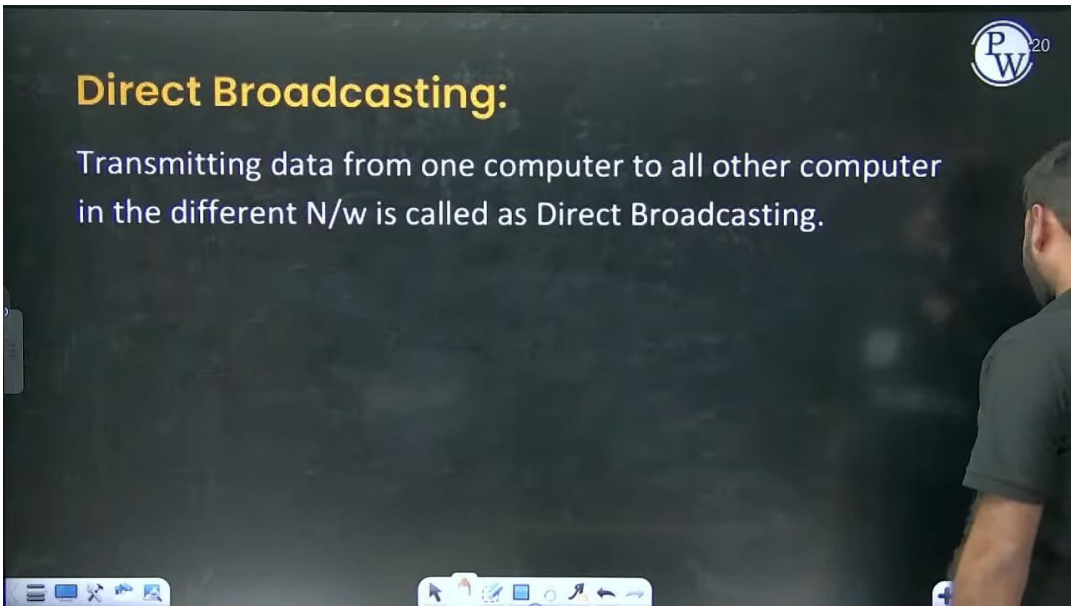
1:03:00


Limited Broadcasting:
Transmitting data from one computer to all other computer
in the sa ork is called as Limited Broadcasting.
NID HID
15.0.0.0
15.23.9.5
SIP DIP
① Data 15.23.9.5 255.255.255.255
S.I.P DIP
② Data 255.255.255.255 15.23.9.5

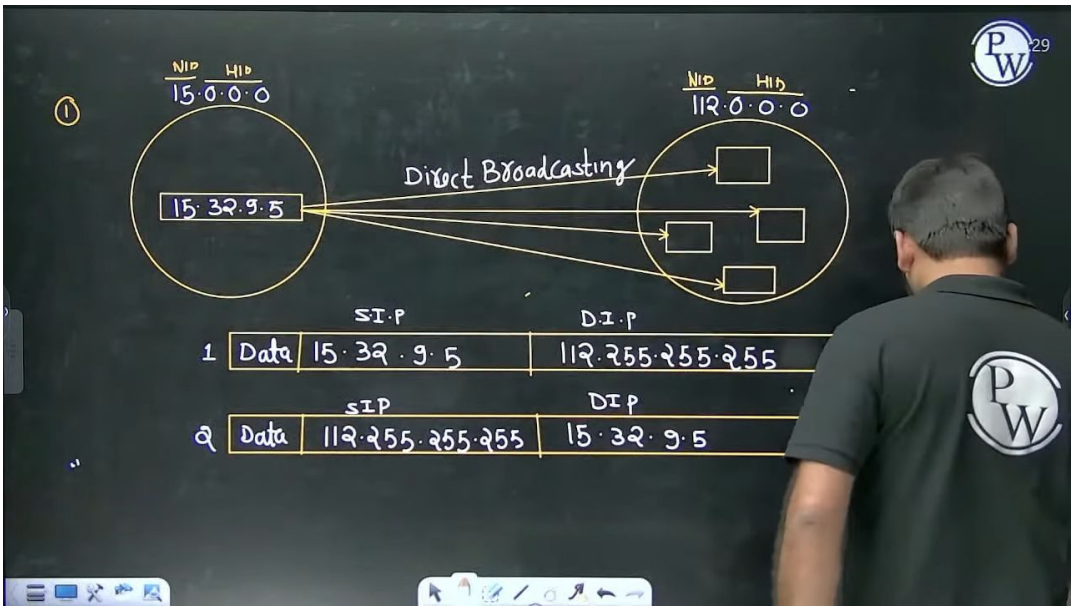
1:08:51


2.
NID
HID
157.163.0.0
157.163.2.5
NID
HID
200.200.200.0
200.200.200.2
SIP
DIP
Data
157.163.2.5
255.255.255.255
SIP
DIP
Data
200.200.200.2

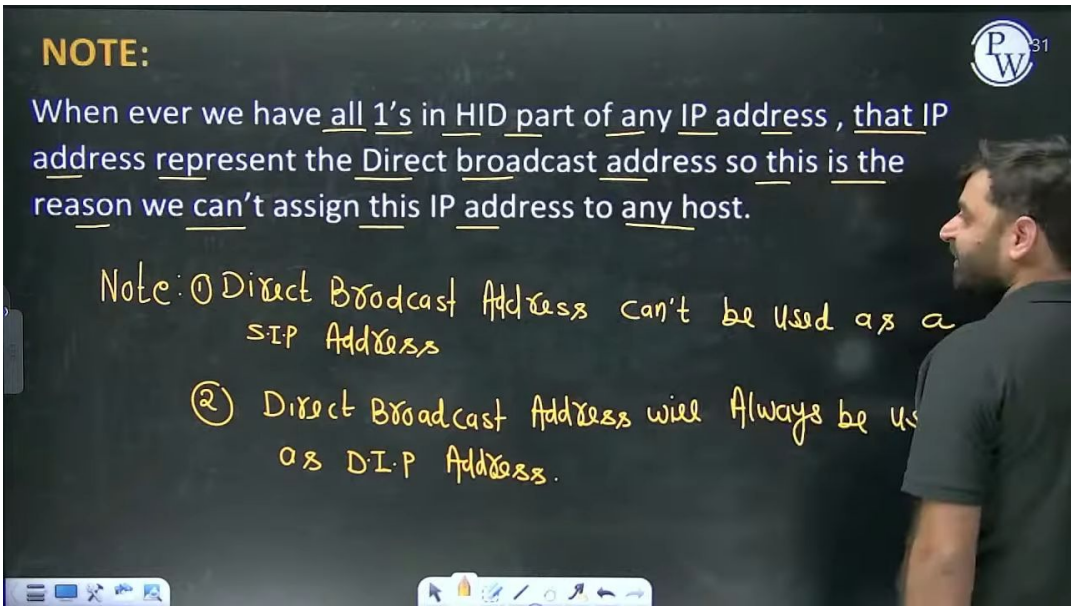
1:17:40


Direct Broadcasting:
Transmitting data from one computer to all other computer in the different N/w is called as Direct Broadcasting.

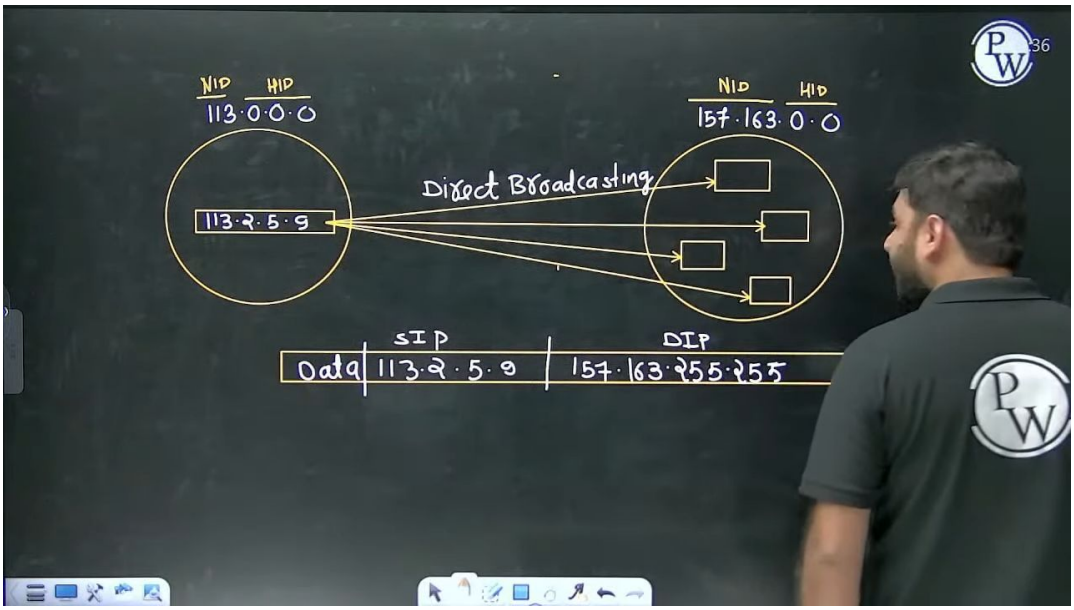
1:17:41


29
NID HID
15·0·0·0
NID HID
112·0·0·0
Direct Broadcasting
15·32·9·5
SIP
DIP
1 Data 15·32·9·5 112·255·255·255
SIP
DIP
2 Data 112·255·255·255 15·32·9·5

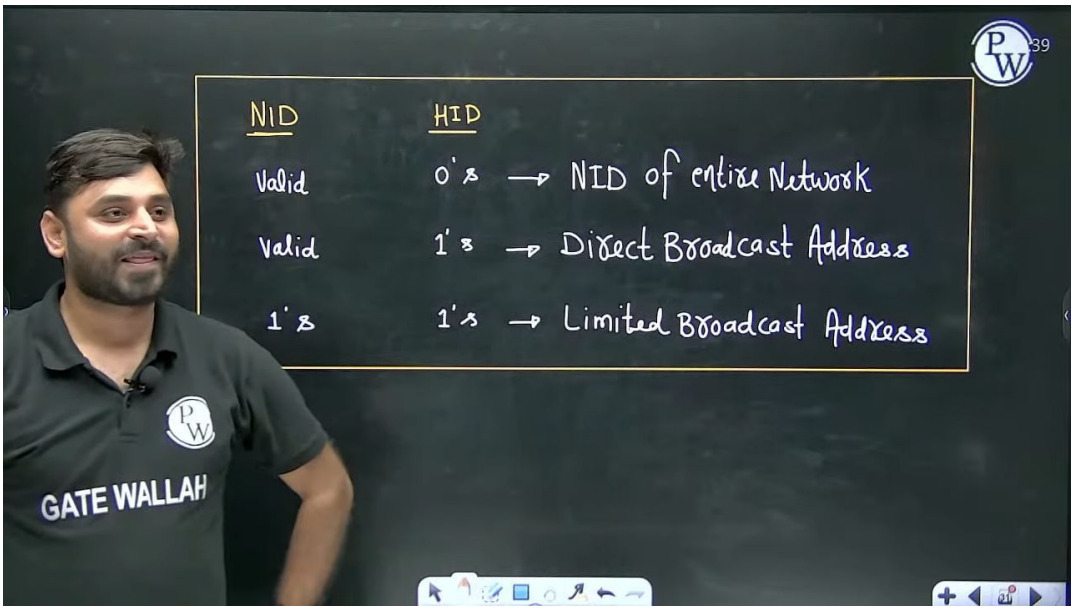
1:26:58


NOTE:
31
When ever we have all 1's in HID part of any IP address , that IP address represent the Direct broadcast address so this is the reason we can't assign this IP address to any host.
Note: ① Direct Brodcast Address can't be used as a SIP Address
② Direct Broadcast Address will Always be us as DIP Address.

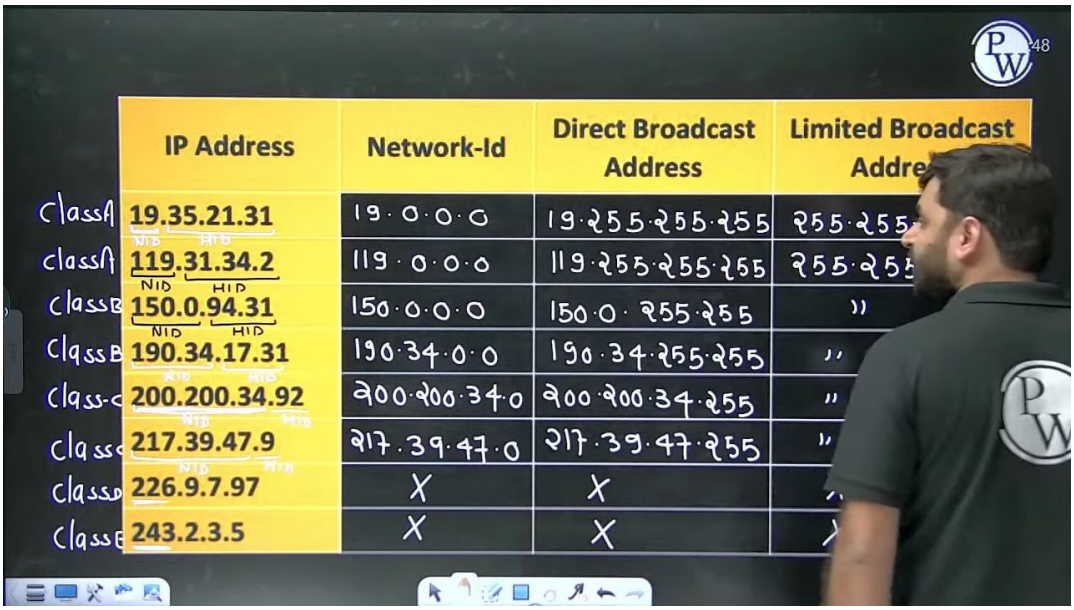
1:28:55


36
NID HID
113·0·0·0
NID HID
157·163·0·0
Direct Broadcasting
113·2·5·9
SIP
DIP
Data
113·2·5·9
157·163·255·255

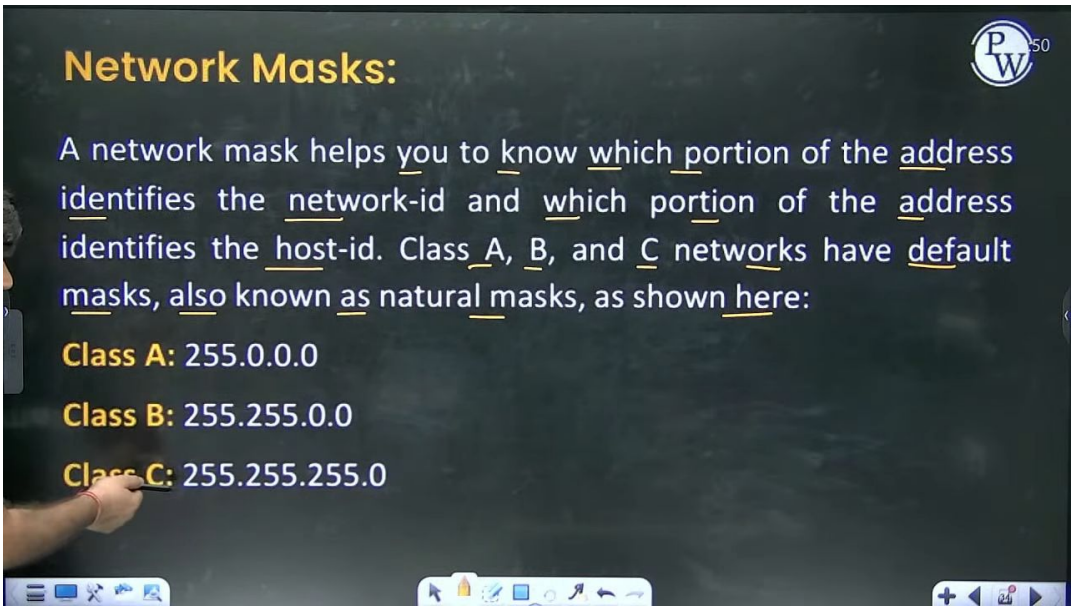
1:33:42


39
NID
HID
Valid
0's → NID of entire Network
Valid
1's → Direct Broadcast Address
1's
1's → Limited Broadcast Address
GATE WALLAH

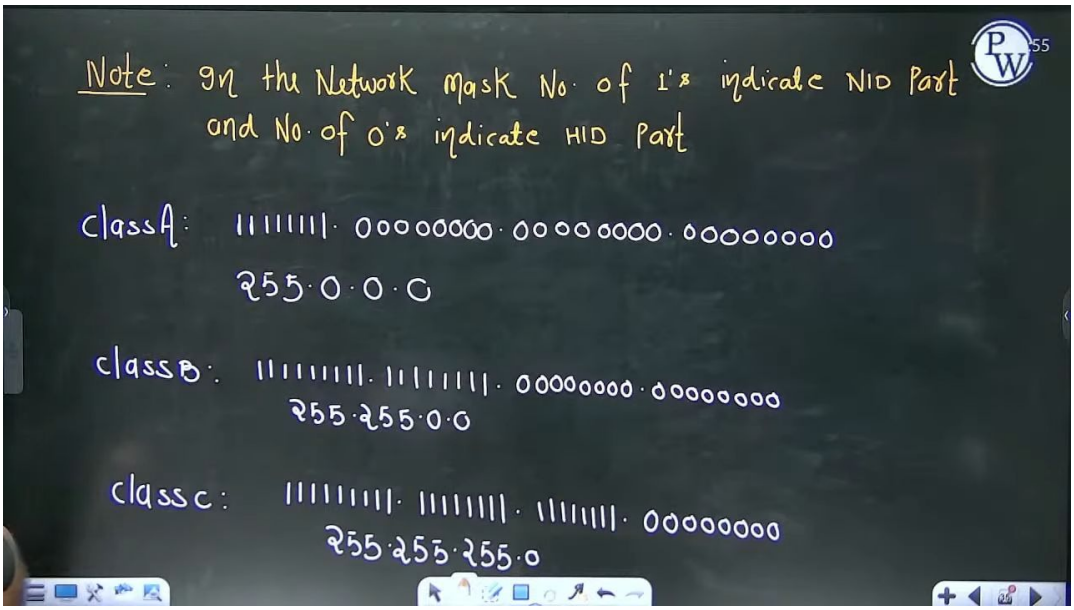
1:36:37


48
IP Address
Network-Id
Direct Broadcast Address
Limited Broadcast Addre
ClassA 19.35.21.31
ClassA 119.31.34.2
ClassB 150.0.94.31
ClassB 190.34.17.31
Class-C 200.200.34.92
Class 217.39.47.9
Class 226.9.7.97
ClassE 243.2.3.5
19.0.0.0
119.0.0.0
150.0.0.0
190.34.0.0
200.200.34.0
217.39.47.0
X
X
19.255.255.255
119.255.255.255
150.0.255.255
190.34.255.255
200.200.34.255
217.39.47.255
X
X

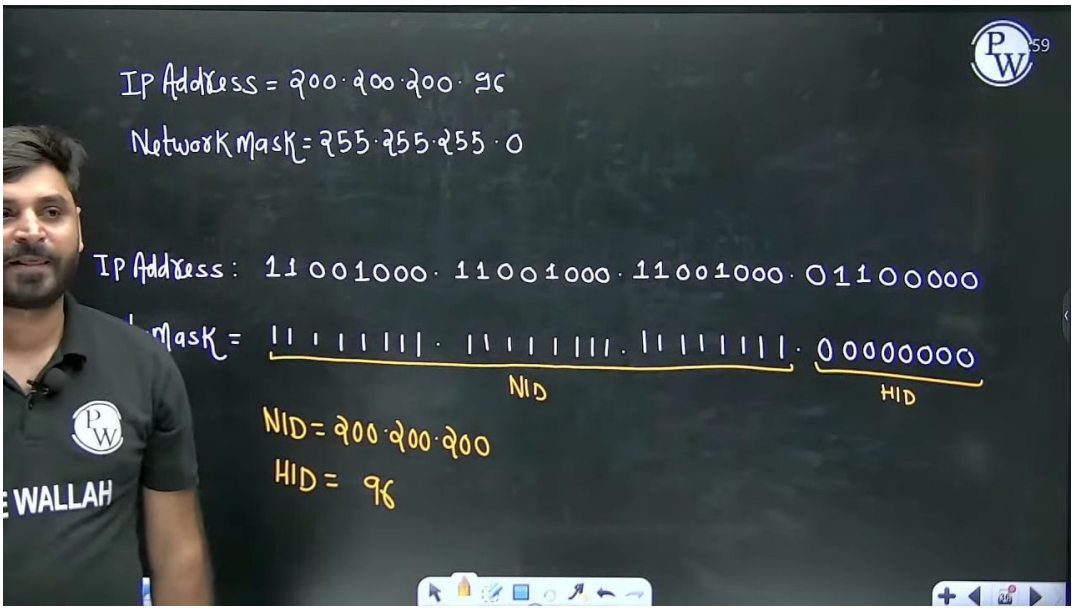
1:46:16


50
Network Masks:
A network mask helps you to know which portion of the address identifies the network-id and which portion of the address identifies the host-id. Class A, B, and C networks have default masks, also known as natural masks, as shown here:
Class A: 255.0.0.0
Class B: 255.255.0.0
Class C: 255.255.255.0

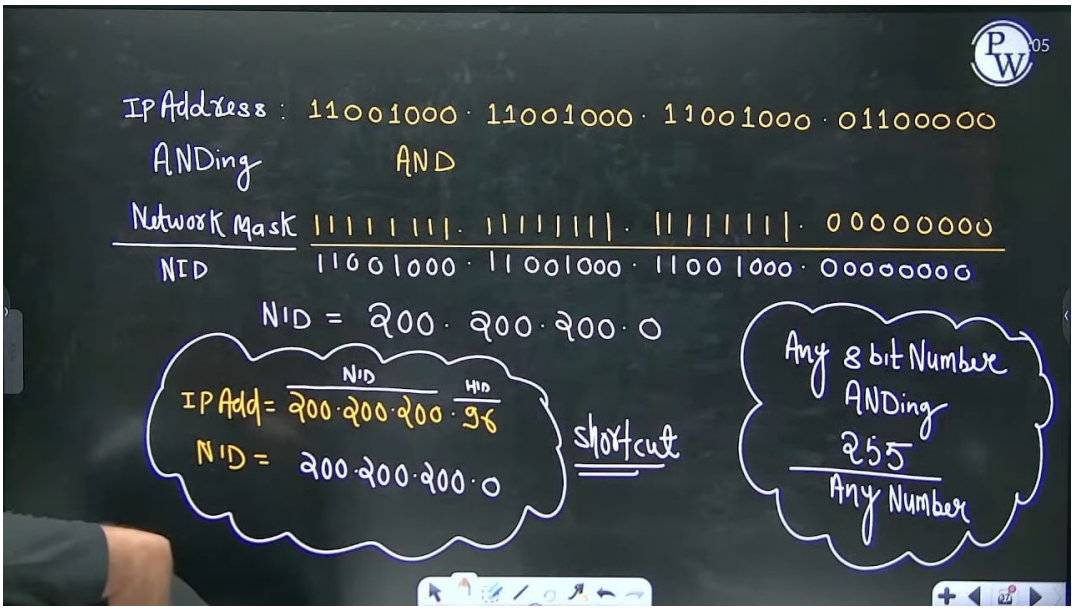
1:48:11


Note: on the Network mask No. of 1's indicate NID Part
and No. of 0's indicate HID Part
ClassA: 11111111.00000000.00000000.00000000
255.0.0.0
classB: 11111111.11111111.00000000.00000000
255.255.0.0
classc: 11111111.11111111.11111111.00000000
255.255.255.0

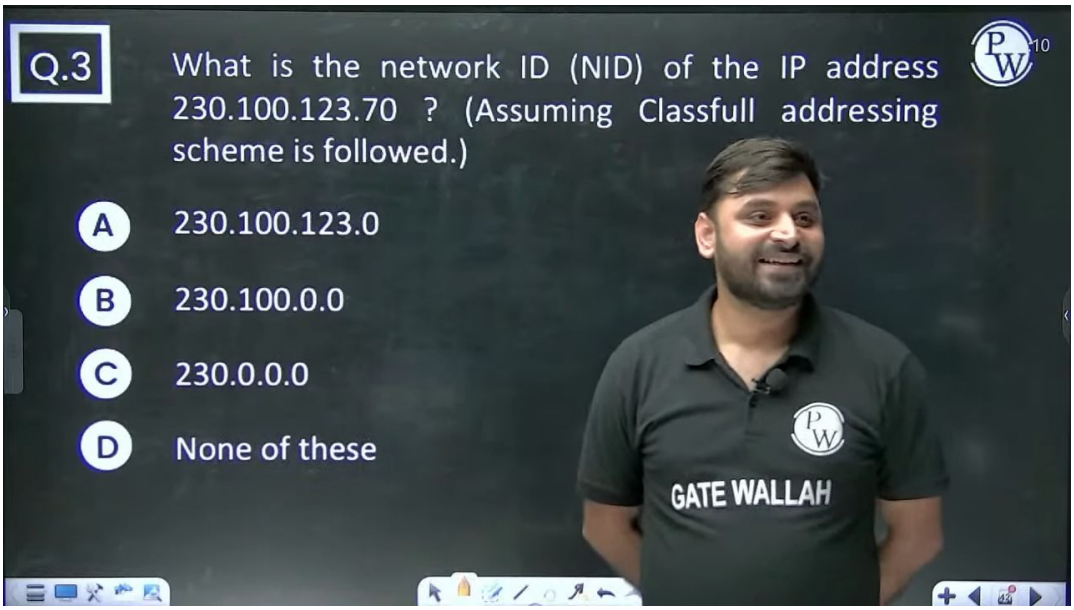
1:53:10


IP Address = 200.200.200.96
Network Mask = 255.255.255.0
IP Address: 11001000.11001000.11001000.01100000
mask = 11111111.11111111.11111111.00000000
NID
HID
NID = 200.200.200
HID = 96
WALLAH

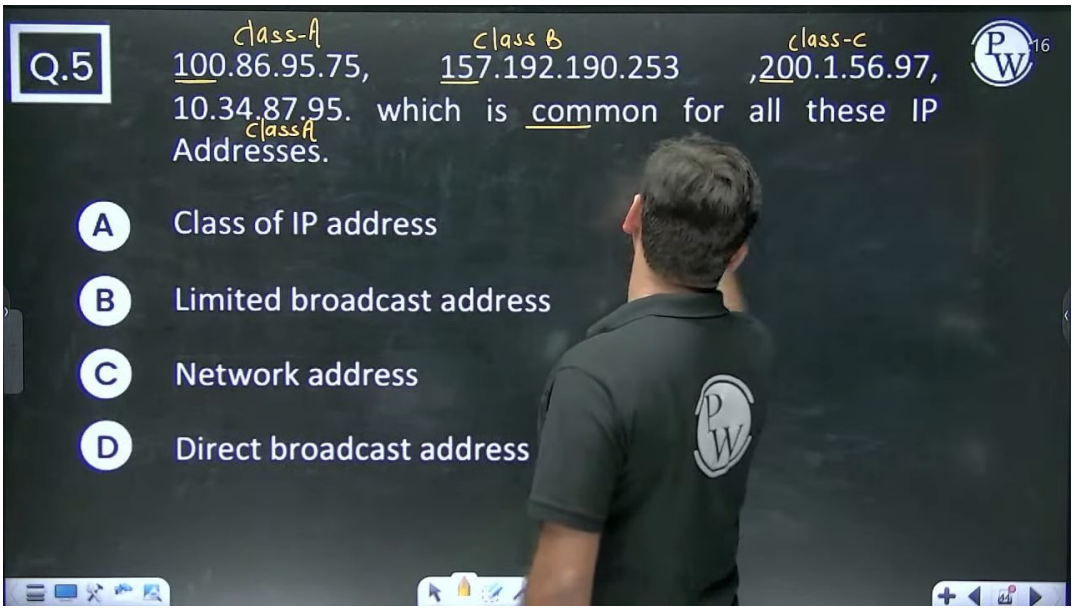
1:56:46


IP Address : 11001000 · 11001000 · 11001000 · 01100000
ANDing
AND
Network Mask 11111111 · 11111111 · 11111111 · 00000000
NID 11001000 · 11001000 · 11001000 · 00000000
NID = 200 · 200 · 200 · 0
IP Add = 200 · 200 · 200 · 96
NID
HID
NID = 200 · 200 · 200 · 0
shortcut
Any 8 bit Number
ANDing
255
Any Number

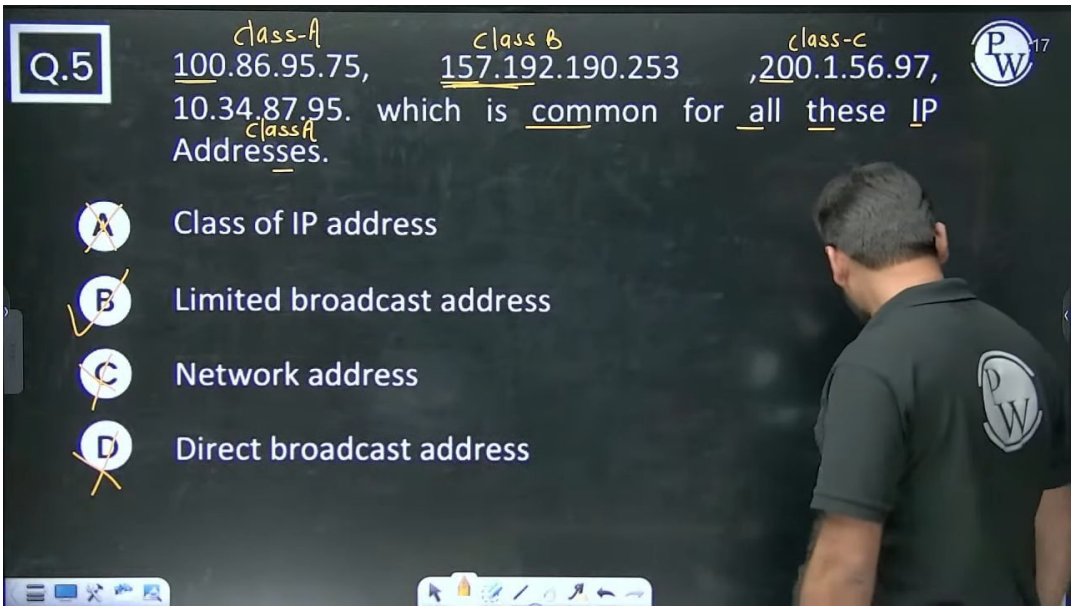
2:03:16


Q.3
What is the network ID (NID) of the IP address 230.100.123.70 ? (Assuming Classfull addressing scheme is followed.)
A 230.100.123.0
B 230.100.0.0
C 230.0.0.0
D None of these
GATE WALLAH

2:08:16


Q.5
Class-A
100.86.95.75,
Class B
157.192.190.253
class-C
,200.1.56.97,
10.34.87.95. which is common for all these IP Addresses.
Class A
A Class of IP address
B Limited broadcast address
C Network address
D Direct broadcast address
16

2:13:28


Q.5
Class-A
100.86.95.75,
Class B
157.192.190.253
class-C
,200.1.56.97,
10.34.87.95. which is common for all these IP Addresses.
Class A
A Class of IP address
B Limited broadcast address
C Network address
D Direct broadcast address
17

2:15:02