Identifying IPv4 addresses

N = all 8 bits in an octet for network portion
n = a bit in the network
H = all 8 bits in an octet for host portion
h = a bit in the host

1
209.165.200.227 /27 [Host]
N.N.N. nnnhhhhh
255.255.255.224
209.165.200.224 /27 [Net]

2
172.31.45.252 /24 [Host]
N.N.N.H
255.255.255.0
172.31.45.0 /24 [Net]

3
10.1.8.200 /26 [Host]
N.N.N. nnhhhhhh
255.255.255.192
10.1.8.192 /26 [Net]

4
172.16.117.77 /20 [Host]
N.N.nnnnhhhh.H
255.255.240.0
172.16.112.0 /20 [Net]

5
10.1.1.101 /25 [Host]
N.N.N.nhhhhhhh
255.255.255.128
10.1.1.0 /25 [Net]

6
209.165.202.140 /27 [Host]
N.N.N. nnnhhhhh
255.255.255.224
209.165.202.128 /27 [Net]

7
192.168.28.45 /28 [Host]
N.N.N.nnnnhhhh
255.255.255.240
192.168.28.32 /28 [Net]

8
10.101.99.17 /23
10.101.98.1 [1st]
10.101.99.254 [Last]
10.101.99.255 [Broadcast]

9
209.165.200.227 /27
209.165.200.225 [1st]
209.165.200.254 [Last]
209.165.200.255 [Broadcast]

10
172.31.45.252 /24
172.31.45.1 [1st]
172.31.45.254 [Last]
172.31.45.255 [Broadcast]

11
10.1.8.200 /26
10.1.8.193 [1st]

12
172.16.117.77 /20
172.16.112.1 [1st]

10·1·8·254 [last]
10·1·8·255 [Broadcast]

10·1·1·101 / 25   ⑬
10·1·1·1 [1st]
10·1·1·126 [last]
10·1·1·127 [Broadcast]

192·168·33·63   ⑮
255·255·255·192
host range = 192·168·33·1 to
           192·168·33·126
∴ Host addr

172·25·12·52   ⑰
255·255·255·0
host range = 172·25·12·1 to
           172·25·12·257
∴ Host addr

172·16·128·48   ⑲
255·255·255·240
host range = 172·16·128·79
           to 172·16·128·62
∴ Network addr

172·16·0·255   ㉑
255·255·0·0
host range = 172·16·0·1 to
           172·16·255·254
∴ host addr

Private   IPv4   range

172·16·127·254 [last]
172·16·127·255 [Broadcast]

209·165·202·140 127   ⑭
209·165·202·129 [1st]
209·165·202·158 [last]
209·165·202·159 [Broadcast]

239·192·1·100   ⑯
255·252·0·0
multicast range = 224·0·0·0 to
              239·255·255·255
∴ multicast address

10·255·0·0   ⑱
255·0·0·0
∴ network addr

209·165·202·159   ⑳
255·255·255·224
host range = 209·165·202·129
           to 209·165·202·158
∴ Broadcast addr

224·10·1·11   ㉒
255·255·255·0
multicast = 224·0·0·0 to
range   239·255·255·255
∴ multicast addr

10.0.0.0 /8 = 10.0.0.0 to 10.255.255.255
172.16.0.0 /12 = 172.16.0.0 to 172.31.255.255
192.168.0.0 /16 = 192.168.0.0 to 192.168.255.255

209.165.201.30 /27 (public) 23
192.168.255.253 /24 (private) 24
10.100.11.103 /16 (private) 25
172.30.1.100 /28 (private) 26
192.31.7.11 /24 (public) 27
172.20.18.150 /22 (private) 28
128.107.10.1 /16 (public) 29
192.135.250.10 /24 (public) 30
64.104.0.11 /16 (public) 31

127.1.0.10 /24 ㉜
Valid Host. addr
Within range

172.16.255.0 /16 ㉝
Invalid Host.addr
Net. addr

241.19.10.100 /24 ㉞
Valid Host.addr
Within Range

192.168.0.254 /24 ㉟
Valid Host. addr
Within Range

192.31.7.255 /24 ㊱
Invalid Host.addr
Broadcast IP

64.102.255.255 /14 ㊲
Invalid Host.addr
Broadcast IP

227.0.0.5 /16 ㊳
Valid Host.addr
Within Range

193.133.219.8 /24
Valid Host.addr
Within Rang

10.0.255.255 /8 ㊴
Invalid Host.addr
Broadcast IP