آی‌پی‌های زیر را به n سابنت تقسیم کنید . (5 سابنت اولیه کافی‌ست)

n = 4 $2^2 \geqslant 4$ 192.168.1.0/24 , n = 4 ①

orginal subnetmask: 11111111.11111111.11111111.00000000

  192.168.1.0/24

splitted subnet mask: 11111111.11111111.11111111.11000000

  192.168.1.0/26   255.255.255.192

$2^{(32-26)} = 2^6 = 64$

  192.168.1.0 — 192.168.1.63

  192.168.1.64 — 192.168.1.127

  192.168.1.128 — 192.168.1.191

  192.168.1.192 — 192.168.1.255

                    172.16.0.0/16 , n=16 ②

n = 16 $2^4 \geqslant 16$

org = 11111111.11111111.00000000.00000000   172.16.0.0/16

splitted sub = 11111111.11111111.11110000.00000000   172.16.0.0/20

  255.255.240.0

$2^{(32-20)} = 2^{12} = 4,096$

① 172.16.0.1 — 172.16.15.255

② 172.16.16.1 — 172.16.31.255

③ 172.16.32.1 — 172.16.47.255

④ 172.16.48.1 — 172.16.62.255

⑤ 172.16.63.1 — 172.16.79.255

$n = 64$ $2^6 \geqslant 64$ ∴ $n = 64$, $10.0.0.0/8$ ②

org = 11111111. 00000000. 00000000. 00000000 $10.0.0.0/8$

splitted: 11111111. 11111100. 00000000. 00000000 $10.0.0.0/14$ 5

255.252.0.0

$$2^{(32-14)} = 2^{18} = 262,144$$

10.0.0.0 – 10.3.255.255	10.16.0.0 – 10.19.255.255
10.4.0.0 – 10.7.255.255	10.20.0.0 – 10.23.255.255
10.8.0.0 – 10.11.255.255	10.24.0.0 – 10.27.255.255
10.12.0.0 – 10.15.255.255	10.28.0.0 – 10.31.255.255

$n = 8$ $2^3 \geqslant 8$ $192.168.10.0/24$, $n = 8$ ③

org = 11111111. 11111111. 11111111. 00000000   ←   15

splitted: 11111111. 11111111. 11111111. 111 00000 $192.168.10.0/27$

255.255.255.224 $2^{(32-27)} = 2^5 = 32$

① 192.168.10.0 – 192.168.10.31

② 192.168.10.32 – 192.168.10.63

③ 192.168.10.64 – 192.168.10.95   20

④ 192.168.10.96 – 192.168.10.127

⑤ 192.168.10.128 – 192.168.10.159

⑥ 192.168.10.160 – 192.168.10.191

⋮

—————————————— parsian

$2^7 \geq 128$

172.31.0.0/16, n = 128 ⑤

org = 11111111.11111111.00000000.00000000

splitted: 11111111.11111111.11111110.00000000   172.31.0.0/23

255.255.254.0

$2^{(32-23)} = 2^9 = 512$

172.31.0.0 — 172.31.1.255

172.31.2.0 — 172.31.3.255

172.31.4.0 — 172.31.5.255

172.31.6.0 — 172.31.7.255

172.31.8.0 — 172.31.9.255

$2^{10} \geq 1000$

10.10.0.0/16 , n = 1000 ④

org: 11111111.11111111.00000000.00000000

splitted: 11111111.11111111.11111111.11000000   10.10.0.0/26

255.255.255.192

$2^{(32-26)} = 2^6 = 64$

① 10.10.0.0 — 10.10.0.63

② 10.10.0.64 — 10.10.0.127

③ 10.10.0.128 — 10.10.0.191

④ 10.10.0.192 — 10.10.0.255

⑤ 10.10.1.0 — 10.10.1.63

⋮

$2^{10} \geqslant 1024$

$192.168.0.0/16, \quad n = 1024 \; \text{\textcircled{v}}$

org: 11111111.11111111.00000000.00000000

splitted: 11111111.11111111.11111111.11000000 $192.168.0.0/26_5$

          255.255.255.192 $2^{(32-26)} = 2^6 = 64$

① 192.168.0.0 — 192.168.0.63

② 192.168.0.64 — 192.168.0.127

③ 192.168.0.128 — 192.168.0.191

④ 192.168.0.192 — 192.168.0.255

⑤ 192.168.1.0 — 192.168.1.63

$\vdots$