FLSM

Class C → 195.23.11.0

Divide it into 5, subnets

Sol^n → Subnets divided, with power of 2

Power of 2, nearest to 5 $= 2^3 = 8$

Value of 2^n, $n = 3$, will be borrowed from Host-ID

Last Byte → $000 | \boxed{00000}$ → No. of hosts in each
                    ↓   subnet.
              For subnets

No. of hosts in each subnet $= 2^5 = 32$

Subnet - Mask $= 255.255.255.224$

as 3 bits borrowed from host - ID.

Subnets:
- 195.23.11.0 — 195.23.11.31
- 195.23.11.32 — 195.23.11.63
- 195.23.11.64 — 195.23.11.95
- 195.23.11.96 — 195.23.11.127
- 195.23.11.128 — 195.23.11.159

Class B → 156.55.0.0

Divide it into 25, subnets.

Sol^m → subnets divided, with power of 2

Power of 2, nearest & greatest than 25, $= 2^5 = 32$

Value of 2^m, $m = 5$, 5 bits borrowed from host-ID.

So → last 2 bytes $\underbrace{00000}_{\downarrow} | \underbrace{000\ 00000000}_{\downarrow \text{No. of}}$

$\qquad\qquad\qquad$ Subnet-ID $\qquad$ Hosts in every.
$\qquad\qquad\qquad\qquad\qquad\qquad\qquad$ subnet.

No. of host $= 2^{11} = 2048.$

Subnet-Mask $= 255.255.248.0$, as 5-bits
$\qquad\qquad\qquad$ borrowed from Host-ID.

Subnets: 156.55.0.0 — 156.55.7.255

$\qquad\qquad$ 156.55.8.0 — 156.55.15.255
$\qquad\qquad\qquad\underset{16}{}$
$\qquad\qquad$ 156.55.16.0 — 156.55.23.255

$\qquad\qquad$ 156.55.24.0 — 156.55.31.255

$\qquad\qquad$ 156.55.32.0 — 156.55.39.255

$\qquad\qquad$ 156.55.40.0 — 156.55.47.255

$\qquad\qquad\qquad\qquad\vdots$

$\qquad\qquad\qquad$ so on.

Class A -: 65.0.0.0

Divide it into 42 subnets

Sol^m → Subnets divided, with power of 2.

Power of 2, nearest and greatest than $42 = 2^6 = 64$.

Value of 2^n, $n = 6$, six bits borrowed from Host-ID.

So, Last 3 bytes.

$$\underbrace{000000}_{\text{Subnet-ID}} | \underbrace{00 \; 00000000 \; 00000000}_{\text{No. of hosts in every subnet.}}$$

No. of host $= 2^{18} = 262,144$.

New Subnet - Mask 255.252.0.0

Subnets : Develop them.