Assignment.

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Create Subnet for the following

200.10.56.93/27

class = C

n = 27

① Bit for Subnet = n - 24
= 27 - 24
= 3

② Bit for host = 32 - n
= 32 - 27
= 5

③ no of subnet = $2^3 = 8$

④ no of host = $2^5 - 2 = 30$

① Subnet 1

Decimal

st id = 200.10.56.00000000 = 0

st id = 200.10.56.00011111 = 31

② Subnet 2

Decimal

First id = 200.10.56.00100000 = 32

ast id = 200.10.56.00111111 = 63

③ Subnet 3

Decimal

First id = 200.10.56.01000000 = 64

last id = 200.10.56.01011111 = 95

Subnet 4 Decimal

First id = 200.10.56.01100000 = 96

Last id = 200.10.56.01111111 = 127

Subnet 5

First id = 200.10.56.10000000 = 128

Last id = 200.10.56.10011111 = 159

Subnet 6

First id = 200.10.56.10100000 = 160

Last id = 200.10.56.10111111 = 191

subnet 7

Fist id = 200.10.56.11000000 = 192

last id = 200.10.56.11011111 = 223

Subnet 8

First id = 200.10.56.11100000 = 224

last id = 200.10.56.11111111 = 255

network address	Host Range	Broadcast Add.
200.10.56.0	200.10.56.1 - 200.10.56.30	200.10.56.31
200.10.56.32	200.10.56.33 - 200.10.56.62	200.10.56.63
200.10.56.64	200.10.56.65 - 200.10.56.94	200.10.56.95
200.10.56.96	200.10.56.97 - 200.10.56.126	200.10.56.127
200.10.56.128	200.10.56.129 - 200.10.56.158	200.10.56.159
200.10.56.160	200.10.56.161 - 200.10.56.190	200.10.56.191
200.10.56.192	200.10.56.193 - 200.10.56.222	200.10.56.223
200.10.56.224	200.10.56.225 - 200.10.56.254	200.10.56.255

ii) Create 7 subnet in 193.56.1.0/24

→ Class = C

n = 24

① Bit for Subnet = n-24

=

① Subnet 1 Decimal

First id 193.56.1.00000000 0

last id 193.56.1.00111111 31

Subnet 2

First id 193.56.1.01000000

last id 193.56.1.01011111

		Decimal
	Subnet 2	
First id =	193.56.1.00100000	32
last id =	193.56.1.00111111	63
	Subnet 3	
First id	193.56.1.01000000	64
last id	192.56.1.01011111	95
	Subnet 4	
First id	193.56.1.01100000	96
last id	193.56.1.01111111	127
	Subnet 5	
First id	193.56.1.10000000	128
last id	193.56.1.10011111	159
	Subnet 6	
First id	193.56.1.10100000	160
last id	193.56.1.10111111	191
	Subnet 7	
First id	193.56.1.11000000	192
last id	193.56.1.11011111	223

Dor VLSM needing 29, 41, 7, 22 & 6 hosts in various ~~Dpart~~ departments.

/25 = 2^7 = 128 = 0 → 128

/26 = 2^6 = 64 = 0 → 64 → 128 → 192

/27 = 2^5 = 32 = 0 → 32 → 64 → 96 → 128 → 160 → 192 → 224

/28 = 2^4 = 16 = 0 → 16 → 32 → 48 → 64 → 80 → 96 → 112 → 144 → 160 → 176 → 192 → 208 → 224 → 240.

/30 = 2^3 = 8 = 0 → 8 → 16 → 24 → 32 → 40 → 48 → 56 → 64 → 72 → 80 → 88 → 96 → 104 → 112 → 120 → 128 → 136 → 144 → 152 → 160 → 168 → 176 → 184 → 192

① Department 1 = 41 Hosts
→ = /26
193.56.1.0 to 193.56.1.63

② Department 2 = 29 Hosts.
→ = /27
193.56.1.64 to 193.51.1.95

③ Department 3 = 22 Hosts
→ = /27

193.56.1.96 to 193.56.1.127

④ Department 4 = 7 Hosts

→ /30

193.56.1.128 to 193.56.1.135

⑤ Department 5 = 6 Hosts

→ /30

193.56.1.136 to 193.56.1.143