4) 4 different subnets for 4 floors

My Network: 10.144.87.0

a) 16 PCs

$2^4 = 16$

⇒ Subnet mask: 32-4=28

⇒ 11111111.11111111.11111111.11110000

$2^4 = 16$ subnets

BUT 59, 46, 35 > 16

⇒ Let $2^6 = 64 > 59, 46, 35, 16$

Subnet mask: 32-6=26

⇒ 11111111.11111111.11111111.11000000

⇒ 255.255.255.192

⇒ $2^2 = 4$ subnets (for 4 floors)

N floor	Depart-t Name	Network addr	Usable Host IP	Broadcast addr
1	IT Department	10.144.87.0	10.144.87.1-10.144.87.62	10.144.87.63
2	Accounting	10.144.87.64	10.144.87.65-10.144.87.126	10.144.87.127
3	Sales Department	10.144.87.128	10.144.87.129-10.144.87.190	10.144.87.191
4	Administration	10.144.87.192	10.14487.193-10.144.87.254	10.144.87.255

AND Subnet Mask: 255.255.255.192