Practical subnetting 6

Class: A
Subnet mask: 255.240.0.0
Subnets needed: 7
20% growth: +2
total needed 9

most hosts : 320
20% growth: 64
total hosts 384

IP range technology: 10.240.0.0 => 10.240.1.128
Science: 10.240.1.129 => 10.240.3.[illegible]2
A&D: 10.240.3.3 => 10.240.4.131
Admin: 10.240.4.132 => 10.240.6.[illegible]5
A to B: 10.240.6.6 => 10.240.7.134
A to C: 10.240.7.135 => 10.240.9.8
B to C: 10.240.9.9 => 10.240.10.137

Class: B
default: 255.255.0.0
Custom: 255.255.255.192
total sub: 1024
total host: 64
usable: 62
bits borrowed: 10

Problem #7
Class: B
default: 255.255.0.0
Custom: $2^{x} = 2000 = \log 2000 / \log 2 =$ 11
sub: 2048
host: 16
usable: 14
bits: 11

255.255.255.224
1111 1111 1110 0000

Problem #5
Class: B
default: 255.255.0.0
Custom: 1111 1111 . 1111 1111 . 1100 0000
255.255.255.192
sub: $2^{10} = 1024$
host: $2^{x} - 2 = 50$ $\log 52 / \log 2 = 6$ 64
usable: 62
bits: 10

Problem 12

Class: C

default: 255.255.255.0

Custom: 1100 0000 => 255.255.255.192

subnets: $2^2 = 4$

hosts: $2^6 = 64$

usable: 62

bits: 2

2nd subnet: 198.125.50.64 → 198.125.50.127

range

subnet number: 198.125.50.64

broadcast: 198.125.50.255

assignable for 3rd subnet: 198.125.50.129 → 198.125.50.190

Practical Subnetting 4

Class: B

Custom mask: 255.255.224.0

minimum subnets: 5

70% growth: +4

total needed: 9

hosts: 325

Subnetting

Problem 1

Class: C
default: 255.255.255.0
Custom: 255.255.255.240
Subnets: $2^4 = 16$
hosts: $2^4 = 16$
Usable addresses: 14
bits borrowed: $2^n = 14 = \log 14 / \log 2 = 4$

- 192.10.10.48 to 192.10.10.63
- 192.10.10.112
- 192.10.10.207
- 192.10.10.129 to 192.10.10.142

subnet - first address
broadcast - last address.

Problem 2 11

Class: B
default: 255.255.0.0
Custom: 1111 1111.1110 0000 → 255.255.~~255~~.~~224~~.0
Subnets: 8
hosts: 8192
Usable addresses: $2^{13} = 8190$
bits: $2^x - 2 = 8000$
$2^x = 8002$
$\log 8002 / \log 2 = 13$
3 bits borrowed.

- ~~135.70.5.x 8192~~ 135.70.160.160 → 135.70.192.
- 135.70.192.192
- ~~135.70.64.64~~ 135.70.96.95
- 135.70.128.129 → 135.70.160.159

~~140~~ 141

2nd subnet : 198.125.50.64 → 198.125.50.127
range
subnet number : 198.125.50.64
broadcast : 198.125.50.255
assignable for 3rd subnet : 198.125.50.129 → 198.125.50.190

Practical subnetting 4

Class: B
Custom mask: 255.255.224.0

minimum subnets: 5
70% growth: +4
total needed: 9

num host addresses: 325
70% growth: 228
total num needed 553

range New York : 135.126.0.0 => 135.126.2.42
range Washington : 135.126.2.43 => 135.126.4.85
range Dallas : 135.126.4.86 -> 135.126.6.127
range A to B : 135.126.6.129 => 135.126.8.170
range A to C : 135.126.8.171 -> 135.126.10.212