Problem 7

Number of needed subnets 2000

Number of needed usable hosts 15

Network Address 178.100.0.0

Address class B

Default subnet mask 255.255.0.0

Custom subnet mask 255.255.255.224

Total number of subnets 2048

Total number of host addresses 64

Number of usable addresses 62

Number of bits borrowed 11

Problem 15

Number of needed usable hosts 50

Network Address 172.59.0.0

Address class B

Default subnet mask 255.255.0.0

Custom subnet mask 255.255.255.224

Total number of subnets 2048

Total number of host addresses 64

Number of usable addresses 62

Number of bits borrowed 11

Problem 11

Number of needed usable hosts 8000

Network Address 135.70.0.0

Address class B

Default subnet mask 255.255.0.0

Custom subnet mask 255.255.224.0

Total number of subnets 8

Total number of host addresses 8192

Number of usable addresses 8190

Number of bits borrowed 3

What is the 6th subnet range 135.70.0.80 to 135.70.0.95

What is the subnet number for the 7th subnet 135.70.0.96

What is the subnet broadcast address for the 3rd subnet 135.70.0.47

What are the assignable addresses for the 5th subnet 135.70.0.65 to 135.70.0.78

Problem 12

Number of needed usable hosts 45

Network Address 192.125.50.0

Address class C

Default subnet mask 255.255.255.0

Custom subnet mask 255.255.255.192

Total number of subnets 1024

Total number of host addresses 64

Number of usable addresses 62

Number of bits borrowed 2

What is the 2nd subnet range 198.125.50.64 to 98.125.50.127

What is the subnet number for the 2nd subnet 198.125.50.64

What is the subnet broadcast address for the 4th subnet 198.125.50.255

What are the assignable addresses for the 3rd subnet 198.125.50.129 to 198.125.50.190

Practical Subnetting 4

Address class B

Custom subnet mask

Minimum number of subnets needed 5

Extra subnets required for 70% growth 4

Total number of subnets needed 9

Number of host addresses in the largest subnet group 325

Number of address needed for 70% growth in the largest subnet 228

Total number of address needed for the largest subnet 553

IP address range for New York 135.126.0.0 to 135.126.15.255

IP address range for Washington D.C 135.126.16.0 to 135.126.31.255

IP address range for Dallas 135.126.32.0 to 135.126.47.255

IP address range for Router A to Router B serial connection 135.126.48.0 to 135.126.63.255

IP address range for Router A to Router C serial connection 135.126.64.0 to 135.126.79.255

Practical Subnetting 6

Address class A

Custom subnet mask

Minimum number of subnets needed 7

Extra subnets required for 20% growth 2

Total number of subnets needed 9

P address range for Technology 10.0.0.0 to 10.15.255.255

IP address range for Science 10.16.0.0 to 10.31.255.255

IP address range for Arts & Drama 10.32.0.0 to 10.47.255.255

IP Address range Administration 10.48.0.0 to 10.63.255.255

IP address range for Router A to Router B serial connection 10.64.0.0 to 10.79.255.255

IP address range for Router A to Router C serial connection 10.80.0.0 to 10.95.255.255

IP address range for Router B to Router C serial connection 10.96.0.0 to 10.111.255.255