

Pittsburgh Technical Institute

Subnetting Quiz

Draw the Subnet Chart:

.128	1	2
.192	2	4
.224	3	8
.240	4	16
.248	5	32
.252	6	64
.254	7	128
.255	8	256
.255.128	9	512
.255.192	10	1024
.255.224	11	2048
.255.240	12	4096
.255.248	13	8192
.255.252	14	16384
.255.254	15	32768
.255.255	16	65536
.255.255.128	17	131072
.255.255.192	18	262144
.255.255.224	19	524288
.255.255.240	20	1048576
.255.255.248	21	2097152
.255.255.252	22	4194304

1. Given the network address of 10.0.0.0, what subnet mask would allow you to have 3500 subnets?

255.255.240.0

Using the subnet mask from above, list 2 valid ranges of IP addresses:

10.0.16.1 – 10.0.31.254

10.0.32.1 – 10.0.63.254

2. Given the network address 207.165.77.0/26, what is the subnet mask?

255.255.255.192

Using the subnet mask from above, list 2 valid ranges of IP addresses:

207.165.77.65 – 207.165.77.126

207.165.77.129 – 207.165.77.191

3. Given the IP address 55.55.55.55 and the subnet mask 255.255.255.224, answer the following:

What is the Network ID of the subnet that this IP address belongs to: 55.55.55.32

What is the Broadcast ID of the subnet that this IP address belongs to: 55.55.55.63

What is the Valid Range of IP addresses that this IP address belongs to:

55.55.55.33 – 55.55.55.62

4. What is the correct subnet mask if the following IP addresses were supernetted together: 222.22.22.0, 222.22.23.0, 222.22.24.0, and 222.22.25.0

255.255.224.0

5. Given the network address of 45.0.0.0 what subnet mask would allow for 1700 host Ids?

255.255.248.0

Find the subnet mask for the following:

10.0.0.0 Required: 14 Networks 255.240.0.0

11.0.0.0 Required: 14 Hosts 255.255.255.240

191.11.2.0 Required: 28 Hosts 255.255.255.224

222.22.2.0 Required: 28 Networks 255.255.255.248

172.16.0.0 Required: 650 Hosts 255.255.252.0

133.44.0.0 Required: 900 IP Addresses 255.255.252.0