

Answer Key for Exercises:

1. How many usable subnets (not theoretical) do you have when using a subnet mask of 255.255.255.240 on Network ID 201.114.168?

14

2. You are given Network ID 222.72.157, with a subnet mask of 255.255.255.248 to setup. How many subnets and hosts will you have?

30 useable subnets and 6 useable hosts on each subnet

3. You are assigned a Network ID of 198.162.10 and asked to configure the network to provide at least six useable subnets with at least 25 hosts on each subnet. What is the BEGINNING IP address of the LAST useable subnet in the network?

198.162.10.193

4. How many useable hosts are on each subnet when the Network ID is 199.215.210 and the subnet mask is 255.255.255.252?

2

5. You are given Network ID 190.90, with a subnet mask of 255.255.192.0 to setup. What are the high-order bits (Leading Bit Values) for this network?

Binary 10

Refer to the table at the bottom pf page 1 of the handout

6. You are assigned a Network ID of 162.160 and asked to configure the network to provide at least 60 useable subnets? What would be the subnet mask for this network?

255.255.252.0

7. How many useable hosts are on each subnet when the Network ID is 150.150 and the subnet mask is 255.255.192.0?

16,382

8. You are assigned a Network ID of 145.19 and asked to configure the network to provide at least 100 useable subnets with at 500 hosts on each subnet. What is the ENDING IP address of the EIGHTH useable subnet in the network?

145.19.17.254

9. You are a private contractor hired by the large company to setup the network for their enterprise. The Network ID is 33 and you need at least 125 subnets in their large network with at least 125,000 hosts on each of the subnets. What would be the subnet mask for this network?

255.254.0.0

10. You are given Network ID 55.0.0.0, with a subnet mask of 255.240.0.0 to setup. How many subnets and hosts will you have?

14 useable subnets and 1,048,574 useable hosts on each subnet