

IFT 266 Introduction to Network Information Communication Technology (ICT)

Lab 44

CIDR Subnetting

Question 1

With this address and subnet mask
152.17.53.170/24

What is the network address?

152.17.53.0

What is subnet mask in decimal NOT binary?

255.255.255.0

What is the broadcast address for this address?

152.17.53.255

Question 2

With this address and subnet mask
202.195.230.64/19

What is the network address?

202.195.224.0

What is subnet mask in decimal NOT binary?

255.255.224.0

What is the broadcast address for this address?

202.195.255.255

Question 3

With this address and subnet mask
142.42.34.187/29

What is the network address?

142.42.34.184

What is subnet mask in decimal NOT binary?

255.255.255.248

What is the broadcast address for this address?

142.42.34.191

Question 4

With this address and subnet mask
90.199.84.28/28

What is the network address?

90.199.84.16

What is subnet mask in decimal NOT binary?

255.255.255.240

What is the broadcast address for this address?

90.199.84.31

Question 5

With this address and subnet mask
28.232.31.120/20

What is the network address?

28.232.16.0

What is subnet mask in decimal NOT binary?

255.255.240.0

What is the broadcast address for this address?

28.232.31.255

Question 6

With this address and subnet mask
88.68.201.125/30

What is the network address?

88.68.201.124

What is subnet mask in decimal NOT binary?

255.255.255.252

What is the broadcast address for this address?

88.68.201.127

Question 7

With this address and subnet mask
164.220.145.49/20

What is the network address?

164.220.144.0

What is subnet mask in decimal NOT binary?

255.255.240.0

What is the broadcast address for this address?

164.220.159.255

Question 8

What are the **subnet mask**, **first available host address of subnet one** (NOT subnet zero), and the **maximum number of hosts per subnet** for the network below? (You need to allow for maximum number of hosts).

Network ID: 188.129.0.0

Subnets Required: 41

Subnet Mask?

255.255.252.0

1st available host address on subnet 1?

188.129.4.1

Maximum number of hosts/subnet?

1024/1022

Question 9

What are the **subnet mask**, **first available host address of subnet one** (NOT subnet zero), and the **maximum number of hosts per subnet** for the network below? (You need to allow for maximum number of hosts).

Network ID: 137.72.0.0

Subnets Required: 84

Subnet Mask?

255.255.254.0

1st available host address on subnet 1?

137.72.2.1

Maximum number of hosts/subnet?

512/510

Question 10

What are the **subnet mask**, **first available host address of subnet one** (NOT subnet zero), and the **maximum number of hosts per subnet** for the network below? (You need to allow for maximum number of hosts).

Network ID: 221.99.189.0

Subnets Required: 30

Subnet Mask?

255.255.255.248

1st available host address on subnet 1?

221.99.189.9

Maximum number of hosts/subnet?

8/6

Question 11

What valid host range is the IP address 172.21.149.224/23 a part of?

172.21.148.1 - 172.21.149.254

Question 12

What is the first valid host on the subnetwork that the node 172.25.130.178/25 belongs to?

172.25.130.1 - 172.25.130.126

Question 13

How many subnets and hosts per subnet can you get from the network 192.168.98.0 255.255.255.252?

64 subnets, 4/2 host

Question 14

What is the first valid host on the subnetwork that the node 192.168.247.251/26 belongs to?

192.168.247.193

Question 15

How many subnets and hosts per subnet can you get from the network 192.168.116.0/28?

16 subnets, 16/14 hosts

Question 16

What is the first valid host on the subnetwork that the node 172.18.232.94 255.255.252.0 belongs to?

172.18.232.1

Question 17

What valid host range is the IP address 192.168.254.181 255.255.255.192 a part of?

192.168.254.129 - 192.168.254.190

Question 18

How many subnets and hosts per subnet can you get from the network 192.168.29.0 255.255.255.240?

16 subnets, 16/14 hosts

Question 19

What valid host range is the IP address 172.22.78.202/28 a part of?

172.22.78.193 - 172.22.78.206

Question 20

Which subnet does host 172.25.245.73/24 belong to?

172.25.245.0 subnet 0

Question 21

Which subnet does host 192.168.116.119 255.255.255.224 belong to?

192.168.116.96 subnet 3

Question 22

Which subnet does host 172.24.171.36/24 belong to?

Question 23

How many subnets and hosts per subnet can you get from the network 192.168.91.0/30?

1 subnet, 256/254 host

Question 24

Which subnet does host 172.30.122.242 255.255.255.192 belong to?

172.30.122.128, subnet 2

Question 25

What is the last valid host on the subnetwork 172.27.174.64/26?

172.27.174.126

Question 26

What is the last valid host on the subnetwork 192.168.210.56 255.255.255.248?

192.168.210.62

Question 27

What is the broadcast address of the network 172.24.57.224/28?

172.24.57.239

Question 28

What is the last valid host on the subnetwork 172.19.197.0/25?

172.19.197.126

Question 29

What is the first valid host on the subnetwork that the node 192.168.83.14 255.255.255.248 belongs to?

192.168.83.9

Question 30

What is the first valid host on the subnetwork that the node 172.20.32.1/20 belongs to?

172.20.32.1