1. You have been allocated a class A network address of **29.0.0.0**. You need to create at least 20 networks and each network will support a maximum of 160 hosts. Would the following two subnet masks Work?

2. – You have been allocated a class B network address of 135.1.0.0 and and need to create 4 subnets each with around 200 hosts what is the easiest mask to use to satisfy the criteria?

3.  Write the IP address 222.1.1.20 mask 255.255.255.192 in CIDR notation

4. Write the IP address 135.1.1.25 mask 255.255. 248.0 in CIDR notation

5 – You have been allocated a class C network address of 211.1.1.0 and are using the default subnet mask of 255.255.255.0 how may hosts can you have?

6 .Subnet the Class C IP Address 195.1.1.0 So that you have 10 subnets each with a maximum 12 hosts on each subnet. List the Address on host 1 on subnet 0,1,2,3,10

7. Subnet the Class C IP Address 205.11.2.0 so that you have 30 subnets.

What is the subnet mask for the maximum number of hosts?

How many hosts can each subnet have?

What is the IP address of host 3 on subnet 2 ?

8. Subnet the Class C IP Address 195.1.1.0 So that you have at least 2 subnets each subnet must have room for 48 hosts .

What are the two possible subnet masks?

9 .Given the subnet Mask **255.255.255.192** What is the host address and subnet of the following IP address 197.1.2.67.

**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. Also, you can use subnet zero and the all-ones subnet.

Top of Form

Network ID: **164.62.0.0**

Subnets Required: **10**

**.** 11 )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. Also, you can use subnet zero and the all-ones subnet

Top of Form

Network ID: **218.227.221.0**

Subnets Required: **56**

12)  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. Also, you can use subnet zero and the all-ones subnet

Top of Form

Network ID: **129.66.0.0**

Subnets Required: **110**

13)  What are the **network address, broadcast address**, and the **subnet mask** for a host with the IP Address below?

Top of Form

IP Address: **96. 37. 64. 207/ 21**

Bottom of Form

14)  What are the **network address, broadcast address**, and the **subnet mask** for a host with the IP Address below?

Top of Form

IP Address: **47. 124. 91. 145/ 29**

Bottom of Form

15) What are the **network address, broadcast address**, and the **subnet mask** for a host with the IP Address below?

Top of Form

IP Address: **118. 40. 68. 225/ 29**

16) What are the **network address, broadcast address**, and the **subnet mask** for a host with the IP Address below?

Top of Form

IP Address: **125. 162. 30. 102/ 25**

**17**) . You work for a large communications corporation named GlobeComm which has been assigned a Class A network address. Currently, the company has 1,000 subnets in offices around the world. You want to add 100 new subnets over the next three years, and you want to allow for the largest possible number of host addresses per subnet.  
  
Which subnet mask would you choose?

18)  What is the broadcast address on subnet 32 given a prefix notation of 12.1.0.0/12?

19) . Your ISP has provided you a T1 connection to their network. They have provided the interface at your end of the Serial connection an IP address of 16.32.96.109/30. For this particular situation, you must supply the IP address of the ISP's interface at the opposite end of the serial connection as your Gateway of Last Resort. What IP address would you specify as the Gateway of last resort?

a)what is the network address?

b)what is the broadcast address?

c)what is the usable address?  
  
20) An Ethernet port on a router in your organization is assigned the IP address 10.65.64.1/21. What is the maximum number of hosts allowed on this subnet?

21) You are designing an IP address scheme for your new remote office. The vice president of IT calls to tell you that you will be in charge of the 192.168.1.64/26 subnetwork. This supplies you with a single subnetwork with 62 hosts. You need to have at least four subnets with 14 hosts in each subnet. What custom subnet mask should you use? .240

22) An IPv6 address is a \_\_\_\_\_-bit address.

23) *How many subnets and hosts per subnet can you get from the network 172.17.0.0/22?*

24) *What valid host range is the IP address 172.20.18.165/20 a part of?*

25)  Your organization is designing a Wide Area Network. Locations have varying numbers of hosts. The largest network will have no more than 55 hosts. What subnet mask accomplishes the goal and maximizes the number of subnets that may be created?

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