Homework 3 Solutions

1) The subnet mask for /24 network to create 4 subnets is **255.255.255.192**.

2) The subnet mask for a /20 network with 2 subnets is **255.255.240.0**

3) A /20 network has a subnet mask of 255.255.248.0. How many subnets [subnets] and how many hosts [hosts] per subnet?

2 subnets

2048 or 2k hosts

4) A /16 network has a subnet mask of 255.255.192.0. How may subnets [subnets]? How many hosts per subnet [hosts]?

4 Subnets

16k or 16,384 hosts

5) Maximum number of hosts in a /24 network with a subnet mask of 255.255.255.224 is

32

Consider the following table for questions 6-10

Subnet Number	Subnet Mask	Next Hop Link
162.36.84.0	255.255.255.192	L1
162.36.84.192	255,255,255.192	L2
162.36.84.128	255.255.255.192	L3
162.36.85.0	255.255.255.128	L4
162.36.85.128	255.255.255.128	L5
162.36.154.0	255.255.255.128	L6
default	255.255.255.192	L7

6) Next hop link for a packet with Destination address 162.36.84.80 is **L7**

7) Next hop link for a packet with Destination address 162.36.84.60 is **L1**

8) Next hop link for a packet with Destination address 162.36.85.80 is **L4**

9) Next hop link for a packet with Destination address 162.36.154.180 is **L7**

10) Next hop link for a packet with Destination address 162.36.85.30 is **L4**