Comp 11 – Chapter 10
Subnetting Practice Answers

1. Given the subnet address of 202.22.22.160 and a subnet mask of 27 bits, find the bits borrowed and the subnet number.

   Bits borrowed = 3 **subnet = 101**
   Subnet number = 6 (5 th usable subnet) **SNM = 255.255.255.224**

2. Given the subnet mask of 255.255.255.240 and the host address of 220.20.20.97, find the subnetwork identifier and broadcast of the subnet the host belongs to and the bits borrowed.

   Bits borrowed = 4 **6 th usable subnet**
   SubNet ID = 220.20.20.96
   SubNet BC = 220.20.20.111

3. Given the license 190.90.0.0 and the fact that you have 2046 useable subnets created, find the number of bits borrowed, and the following information about the 100 th usable subnet: subnet address/identifier, the subnet broadcast, and the usable host address range.

   Bits borrowed = 11
   SubNet ID = 190.90.12.128
   SubNet BC = 190.90.12.159
   Usable hosts = 190.90.12.129 to 190.90.12.158

4. Given a Class B the subnet mask of 255.255.248.0 and 1024 useable hosts per subnet, find the number of bits borrowed.

   Bits borrowed = 5

5. Given the host address of 147.47.0.12 and a subnet mask with 29 bits, find the number of bits borrowed and the subnet broadcast and address or the subnet the host belongs to.

   Bits borrowed = 13
   Subnet number = 2 (1st usable subnet)
   SubNet ID = 147.47.0.8
   SubNet BC = 147.47.0.15

6. Given the subnet broadcast of 120.223.255.255 and subnet mask of 255.224.0.0, find the bits borrowed, subnet address for the subnet to which the host belongs, and the usable host range of the subnet.

   Bits borrowed = 3
   SubNet ID = 120.192.0.0
   Usable hosts = 120.192.0.1 to 120.223.255.254

7. Given 210.10.10.114 and a subnet mask with 30 bits, find the subnet number and address for the subnet to which the host belongs.

   SubNet ID = 210.10.10.112
   Subnet number = 29 (28 th usable subnet)