**Case Project 6-1**

As the network administrator for a growing ISP, you want to make efficient use of your network addresses. One of the network addresses IANA assigned to you is a Class C network of 197.14.88.0. You have decided to use the addresses in this Class C network to satisfy the IP address requirements of 16 corporate customers who need between 10 and 14 addresses each. Calculate a subnet mask that meets their needs. List the subnet mask and the first four sub- net addresses the mask will create.

Subnet mask : 255.255.255.240/28

1. 197.14.88.15   
  
2. 197.14.88.31   
  
3. 197.14.88.47   
  
4. 197.14.88.63

**Case Project 6-2**

You’re the head network administrator for a large manufacturing enterprise that’s completing its support for IPv6. The company has six major locations with network administrators and several thousand users in each location. You’re using a base IPv6 address of 2001:DB8:FAB/48 and want network administrators to be able to subnet their networks however they see fit. You also want to maintain a reserve of address spaces for a possible 6 to 10 addi- tional locations in the future. Each network administrator should be able to construct at least 200 subnets from the addresses you supply, and each location should have the same amount of available address space. What IPv6 addresses should you assign to each location? When constructing your answer, list each location as Location 1, Location 2, and so forth.

Location 1 – 2001:DB8:A00:0000-0199

Location 1 – 2001:DB8:A00:0200-0399

Location 1 – 2001:DB8:A00:0400-0599

Location 1 – 2001:DB8:A00:0600-0799

Location 1 – 2001:DB8:A00:0800-0999

Location 1 – 2001:DB8:A00:1000-1199

Future Locations 7 -14 – 2001:DB8:A00:1200…