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**Homework 1**

**Example 1: Given the following IP address 122.72.240.192 and a subnet mask of 255.192.0.0/10 determine the following:**

1. **Class of the IP**

**A**

1. **Default subnet mask**

**255.0.0.0**

1. **Network Address**

**122.0.0.0**

1. **Broadcast address of the network**

**122.255.255.255**

1. **Subnet ID**

**122.64.0.0**

1. **Network Bits=…8…,Host Bits=…22.., Subnet Bits=…2……**
2. **Broadcast address of the subnet.**

**122.127.255.255**

1. **First host in the subnet.**

**122.64.0.1**

1. **Last host in the subnet.**

**122.127.255.254**

**Example 2: Given the following IP address 188.35.167.155 a subnet mask of 255.255.192.0/18 determine the following:**

1. **Class of the IP**

**B**

1. **Default subnet mask**

**255.255.0.0**

1. **Network Address**

**188.35.0.0**

1. **Broadcast address of the network**

**188.35.255.255**

1. **Subnet ID**

**188.35.128.0**

1. **Network Bits=…16…,Host Bits=…14.., Subnet Bits=…2……**
2. **Broadcast address of the subnet.**

**188.35.191.255**

1. **First host in the subnet.**

**188.35.128.1**

1. **Last host in the subnet.**

**188.35.191.254**

**Example 3**: **Given the following IP address 220.33.56.240 a subnet mask of 255.255.255.248/29 determine the following:**

1. **Class of the IP**

**C**

1. **Default subnet mask**

**255.255.255.0**

1. **Network Address**

**220.33.56.0**

1. **Broadcast address of the network**

**220.33.56.255**

1. **Subnet ID**

**220.33.56.240**

1. **Network Bits=…24…,Host Bits=…3.., Subnet Bits=…5……**
2. **Broadcast address of the subnet.**

**220.33.56.247**

1. **First host in the subnet.**

**220.33.56.241**

1. **Last host in the subnet.**

**220.33.56.246**