**Question**

1. Variable length subnet Masking
2. 20.128.16.0/25
3. 1st – 50 host
4. 2nd – 30 host
5. 4th & 5th - 12 host

## Calculate 1st and last host address for the above networks?

1. Hint- 7 bit – 1-network, 6 host
2. 0 – 50 host
3. 1 – split – 1-network, 5-host
4. 0 – 30 host
5. 1-split -1(2) – network, 4-host (14)

|  |
| --- |
| **Network Address**  **Host Address**  **Subnet Address** |

**Answer:**

20.128.16.0/25   
20.128.16.0**0000000** → Network Address

**1st – 50 host for 0 Bit**  
26→ 64 -2 = 62  
**20.128.16.00**000000 → Host Address **20.128.16.0**0**000000** → Subnet Bit = 0First Address → 20.128.16.00000001 🡪 20.128.16.1  
Last Address → 20.128.16.00111110 → 20.128.16.62

**20.128.16.00**000000 → Host Address **20.128.16.0**1**000000** → Subnet Bit = 1First Address → **20.128.16.01000001** → 20.128.16.65  
Last Address → **20.128.16.01111110** → 20.128.16.126

**2nd – 30 host for 1 Bit**  
25→ 32 -2 = 30  
**20.128.16.000**00000 → Host Address **20.128.16.0**10**00000** → Subnet Bit = 0First Address → 20.128.16.0**1000001** → 20.128.16.65  
Last Address → 20.128.16.0**1011110** → 20.128.16.94

**2nd – 30 host for 1 Bit**  
25→ 32 -2 = 30  
**20.128.16.000**00000 → Host Address **20.128.16.0**11**00000** → Subnet Bit = 1First Address → 20.128.16.0**1100001** → 20.128.16.97  
Last Address → 20.128.16.0**1111110** → 20.128.16.126

**4th & 5th – 12 host for 0 Bit**  
24→ 16-2 = 14  
**20.128.16.0000**0000 → Host Address **20.128.16.0**110**0000** → Subnet Bit = 0First Address → 20.128.16.0**1100001** → 20.128.16.97  
Last Address → 20.128.16.0**1101110** → 20.128.16.110

**4th & 5th – 12 host for 1 Bit**  
24→ 16-2 = 14  
**20.128.16.0000**0000 → Host Address **20.128.16.0**111**0000** → Subnet Bit = 1First Address → 20.128.16.0**1110001** → 20.128.16.113  
Last Address → 20.128.16.0**1111110** → 20.128.16.126

**উদাহরনঃ**

সাবনেট ৩ বিট আসলে আমাকে প্রথম ২ বিট ১ ধরে এবং লাস্ট বিট ০ ধরে করতে হবে সেটা সাবনেট ০ এর জন্য।

এবং

সাবনেট ১ এর জন্য আমাকে সাবনেট এর ৩ বিটকেই ১ ধরে আমাকে হিসাব করতে হবে।