**A+**

**220-901**

**2.3, 2.4**

**hands-on project 14-1 practice Using Subnet masks**

practice your skills using subnet masks, fill in Table 14-2. First, convert decimal values to binary and then record your decisions in the last column.

That brings us to a fun way of explaining subnet masks. Suppose all the tall sticks shown in Figure 14-8 belong to the same large network that has been subnetted. The short stick represents the subnet mask for all subnets. How many subnets are in the network? Which sticks belong in the same subnet as Stick 5? As Stick 6?

|  |  |  |  |
| --- | --- | --- | --- |
| **Local Ip address** | **Subnet mask** | **other Ip address** | **on the Same Network? (yes or No)** |
| **15.50.212.59**  **binary:**  **00001111.00110010.11010100.00111011** | **255.255.240.0**  **binary:**  **11111111.11111111.11110000.00000000** | **15.50.235.80**  **binary:**  **00001111.00110010.11101011.01010000** | No |
| **192.168.24.1**  **binary:**  **11000000.10101000.00011000.00000001** | **255.255.248.0**  **binary:**  **11111111.11111111.11111000.00000000** | **192.168.31.198**  **binary:**  **11000000.10101000.00011111.11000110** | Yes |
| **192.168.0.1**  **binary:**  **11000000.10101000.00000000.00000001** | **255.255.255.192**  **binary:**  **11111111.11111111.11111111.11000000** | **192.168.0.63**  **binary:**  **11000000.10101000.00000000.00111111** | Yes |
| **192.168.0.10**  **binary:**  **11000000.10101000.00000000.00001010** | **255.255.255.128**  **binary:**  **11111111.11111111.11111111.10000000** | **192.168.0.120**  **binary:**  **11000000.10101000.00000000.01111000** | Yes |



**table 14-2** Practice using subnet masks

Q: How many subnets are in the network? Which sticks belong in the same subnet as Stick 5? As Stick 6?

A: 4 subnets are in the network.

1, 5, 8, 9, 10, 11, 13, 15, 16

2, 12

3, 6, 7,

4, 14, 17 are having the same subnets.