You are given the IP Address: 222.15.1.0 /27

Determine the following:

1. New Subnet Mask

2. No. of Subnets

3. No. of usable hosts per subnet

4. Subnet Size

5. Network ID, Broadcast ID, Usable Hosts ID Range

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **128** | **64** | **32** | **16** | **8** | **4** | **2** | **1** |
| **1** | **1** | **1** | **0** | **0** | **0** | **0** | **0** |
| **/25** | **/26** | **/27** | **/28** | **/29** | **/30** | **/31** | **/32** |

|  |  |
| --- | --- |
| New Subnet Mask | 255.255.255.224 /27 |
| No. of Subnets | 23 = 8 subnets |
| No. of usable hosts per subnet | 2h – 2 = 25 – 2 = 30 usable host per subnet |
| Subnet Size | 2h = 25 = 32 |

|  |  |  |  |
| --- | --- | --- | --- |
| Subnet | Network ID | Usable Host ID Range | Broadcast ID |
| 1 | 222.15.1.0 | 222.15.1.1  222.15.1.30 | 222.15.1.31 |
| 2 | 222.15.1.32 | 222.15.1.33  222.15.1.62 | 222.15.1.63 |
| 3 | 222.15.1.64 | 222.15.1.65  222.15.1.94 | 222.15.1.95 |
| 4 | 222.15.1.96 | 222.15.1.97  222.15.1.126 | 222.15.1.127 |
| 5 | 222.15.1.128 | 222.15.1.129  222.15.1.158 | 222.15.1.159 |
| 6 | 222.15.1.160 | 222.15.1.161  222.15.1.190 | 222.15.1.191 |
| 7 | 222.15.1.192 | 222.15.1.193  222.15.1.222 | 222.15.1.223 |
| 8 | 222.15.1.224 | 222.15.1.222  222.15.1.254 | 222.15.1.255 |

You are given the IP Address: **223.16.10.0 /29**

Determine the following:

1. New Subnet Mask

2. No. of Subnets

3. No. of usable hosts per subnet

4. Subnet Size

5. Network ID, Broadcast ID, Usable Hosts ID Range (get only the first 7 subnets)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **128** | **64** | **32** | **16** | **8** | **4** | **2** | **1** |
| **1** | **1** | **1** | **1** | **1** | **0** | **0** | **0** |
| **/25** | **/26** | **/27** | **/28** | **/29** | **/30** | **/31** | **/32** |

|  |  |
| --- | --- |
| New Subnet Mask | 255.255.255 .248 /29 |
| No. of Subnets | 25 = 32 subnets |
| No. of usable hosts per subnet | 2h – 2 = 23 – 2 = 6 usable host per subnet |
| Subnet Size | 2h = 23 = 8 |

|  |  |  |  |
| --- | --- | --- | --- |
| Subnet | Network ID | Usable Host ID Range | Broadcast ID |
| 1 | 223.16.10.0 | 223.16.10.1  223.16.10.6 | 223.16.10.7 |
| 2 | 223.16.10.8 | 223.16.10.9  223.16.10.14 | 223.16.10.15 |
| 3 | 223.16.10.16 | 223.16.10.17  223.16.10.22 | 223.16.10.23 |
| 4 | 223.16.10.24 | 223.16.10.25  223.16.10.30 | 223.16.10.31 |
| 5 | 223.16.10.32 | 223.16.10.33  223.16.10.38 | 223.16.10.39 |
| 6 | 223.16.10.40 | 223.16.10.41  223.16.10.46 | 223.16.10.47 |
| 7 | 223.16.10.48 | 223.16.10.49  223.16.10.54 | 223.16.10.55 |