Crea una tabla en algún editor de texto para cada una de las siguientes subredes, con las columnas "nombre de red", máscara, primera IP, última IP y broadcast.

| **Máscara de subred** | **Bits** | **notación CIDR** | **Número de hosts** |
| --- | --- | --- | --- |
| 0.0.0.0 | 0 | /0 | 4294967296 |
| 128.0.0.0 | 1 | /1 | 2147483648 |
| 192.0.0.0 | 2 | /2 | 1073741824 |
| 224.0.0.0 | 3 | /3 | 536870912 |
| 240.0.0.0 | 4 | /4 | 268435456 |
| 248.0.0.0 | 5 | /5 | 134217728 |
| 252.0.0.0 | 6 | /6 | 67108864 |
| 254.0.0.0 | 7 | /7 | 33554432 |
| 255.0.0.0 | 8 | /8 (A) | 16777216 |
| 255.128.0.0 | 9 | /9 | 8388608 |
| 255.192.0.0 | 10 | /10 | 4194304 |
| 255.224.0.0 | 11 | /11 | 2097152 |
| 255.240.0.0 | 12 | /12 | 1048576 |
| 255.248.0.0 | 13 | /13 | 524288 |
| 255.252.0.0 | 14 | /14 | 262144 |
| 255.254.0.0 | 15 | /15 | 131072 |
| 255.255.0.0 | 16 | /16 (B) | 65536 |
| 255.255.128.0 | 17 | /17 | 32768 |
| 255.255.192.0 | 18 | /18 | 16384 |
| 255.255.224.0 | 19 | /19 | 8192 |
| 255.255.240.0 | 20 | /20 | 4096 |
| 255.255.248.0 | 21 | /21 | 2048 |
| 255.255.252.0 | 22 | /22 | 1024 |
| 255.255.254.0 | 23 | /23 | 512 |
| 255.255.255.0 | 24 | /24 (C) | 256 |
| 255.255.255.128 | 25 | /25 | 128 |
| 255.255.255.192 | 26 | /26 | 64 |
| 255.255.255.224 | 27 | /27 | 32 |
| 255.255.255.240 | 28 | /28 | 16 |
| 255.255.255.248 | 29 | /29 | 8 |
| 255.255.255.252 | 30 | /30 | 4 |
| 255.255.255.254 | 31 | /31 | 2 |
| 255.255.255.255 | 32 | /32 | 1 |

a)192.168.1.0/24, crear 6 subredes

2^3-2=6

[192.168.1.]00000000 Red Host Subred

[192.168.1.111]00000/27

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Nombre de red | Mascara | Primera ip | Ultima IP | Broadcast |
| 192.168.1.0 | 192.168.1.224 | 192.168.1.1 | 192.168.1.30 | 192.168.1.31 |
| 192.168.1.32 | 192.168.1.224 | 192.168.1.33 | 192.168.1. 62 | 192.168.1. 63 |
| 192.168.1.64 | 192.168.1.224 | 192.168.1.65 | 192.168.1. 94 | 192.168.1. 95 |
| 192.168.1.96 | 192.168.1.224 | 192.168.1.97 | 192.168.1. 126 | 192.168.1. 127 |
| 192.168.1.128 | 192.168.1.224 | 192.168.1.129 | 192.168.1. 158 | 192.168.1. 159 |
| 192.168.1.160 | 192.168.1.224 | 192.168.1.161 | 192.168.1. 190 | 192.168.1.191 |

b)192.168.1.0/25, crear 4 subredes

2^3-2=6

192.168.1.128 🡪192.168.1.10000000

192.168.1.11110000/28

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Nombre de red | Mascara | Primera ip | Ultima IP | Broadcast | |
| 192.168.1.0 | 192.168.1.240 | 192.168.1.1 | 192.168.1.14 | 192.168.1.15 | |
| 192.168.1.16 | 192.168.1.240 | 192.168.1.17 | 192.168.1.30 | 192.168.1.31 |
| 192.168.1.32 | 192.168.1.240 | 192.168.1.33 | 192.168.1.46 | 192.168.1.47 |
| 192.168.1.48 | 192.168.1.240 | 192.168.1.49 | 192.168.1.62 | 192.168.1.63 |
| 192.168.1.64 | 192.168.1.240 | 192.168.1.65 | 192.168.1.78 | 192.168.1.79 |

c) 192.168.1.128 /25, crear 4 subredes

2^3-2=6

192.168.1.128 🡪 192.168.1.10000000

192.168.1.11110000/28

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Nombre de red | Mascara | Primera ip | Ultima IP | Broadcast | |
| 192.168.1.128 | 192.168.1.240 | 192.168.1.129 | 192.168.1.142 | 192.168.1.143 |
| 192.168.1.144 | 192.168.1.240 | 192.168.1.145 | 192.168.1.158 | 192.168.1.159 |
| 192.168.1.160 | 192.168.1.240 | 192.168.1.161 | 192.168.1.174 | 192.168.1.175 |
| 192.168.1.176 | 192.168.1.240 | 192.168.1.177 | 192.168.1.190 | 192.168.1.191 |