

VLSM Addressing

(Sample)

Problem 25

You are developing a school network with the class C address 192.168.2.0/24. There will be three computer labs with 30 computers each that need to be on different sub-subnets. Forty eight classrooms with one computer each that will comprise a single sub-subnet. The administrative office and guidance office contain a total of seven computers which will need to be grouped together. Plan for four more mini labs with six computers to each sub-subnetwork. Divide the network using variable length subnet masks. Complete the information required below. Remember to work from largest to smallest.

| Subnet | Subnet Address | Subnet Mask (/X) | First Usable Host | Last Usable Host | Broadcast Address |
|--------|----------------|------------------|-------------------|------------------|-------------------|
| 1 | 192.168.2.0 | /26 | 192.168.2.1 | 192.168.2.62 | 192.168.2.63 |
| 2 | 192.168.2.64 | /27 | 192.168.2.65 | 192.168.2.94 | 192.168.2.95 |
| 3 | 192.168.2.96 | /27 | 192.168.2.97 | 192.168.2.126 | 192.168.2.127 |
| 4 | 192.168.2.128 | /27 | 192.168.2.129 | 192.168.2.158 | 192.168.2.159 |
| 5 | 192.168.2.160 | /28 | 192.168.2.161 | 192.168.2.174 | 192.168.2.175 |
| 6 | 192.168.2.176 | /29 | 192.168.2.177 | 192.168.2.182 | 192.168.2.183 |
| 7 | 192.168.2.184 | /29 | 192.168.2.185 | 192.168.2.190 | 192.168.2.191 |
| 8 | 192.168.2.192 | /29 | 192.168.2.193 | 192.168.2.198 | 192.168.2.199 |
| 9 | 192.168.2.200 | /29 | 192.168.2.201 | 192.168.2.206 | 192.168.2.207 |
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VLSM Addressing

(Sample)

Problem 26

You are setting up a small business network with the class C address 220.55.80.0/24. The marketing division will need 12 computers. Research and development needs 27 computers. The reception area will need two computers. Management requires 19 computers. Divide the network using variable length subnet masks. Complete the information required below. Remember to work from largest to smallest.

| Subnet | Subnet Address | Subnet Mask (/X) | First Usable Host | Last Usable Host | Broadcast Address |
|--------|----------------|------------------|-------------------|------------------|-------------------|
| 1 | 220.55.80.0 | /27 | 220.55.80.1 | 220.55.80.30 | 220.55.80.31 |
| 2 | 220.55.80.32 | /27 | 220.55.80. | 220.55.80.62 | 220.55.80.63 |
| 3 | 220.55.80.64 | /28 | 220.55.80.65 | 220.55.80.78 | 220.55.80.79 |
| 4 | 220.55.80.80 | /30 | 220.55.80.81 | 220.55.80.82 | 220.55.80.83 |
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