



#### VLSM Steps:

1. Assign the largest subnet at the start of the address space.
2. Assign the second-largest subnet after it.
3. Repeat the process until all subnets have been assigned.

In real life, you should leave extra room in each subnet for future growth. But when taking a test, do exactly as the instructions say.

NETWORK	VLSM	MASK	RANGE
LAN2 (1 <sup>st</sup> Largest)	LAN2: /25 Network Address: 1 1 0 0 0 0 0 0 . 1 0 1 0 1 0 0 0 . 0 0 0 0 0 1 0 1 . 0 0 0 0 0 0 0 0 192 . 168 . 5 . 0 Broadcast Address: 1 1 0 0 0 0 0 0 . 1 0 1 0 1 0 0 0 . 0 0 0 0 0 1 0 1 . 0 1 1 1 1 1 1 1 192 . 168 . 5 . 127 $2^7 - 2 = 126$ usable addresses (/26 = 62 usable addresses = not enough!)	255.255.255.128	192.168.5.0 - 192.168.5.127
LAN1 (2 <sup>nd</sup> Largest)	LAN1: /26 Network Address: 1 1 0 0 0 0 0 0 . 1 0 1 0 1 0 0 0 . 0 0 0 0 0 1 0 1 . 1 0 0 0 0 0 0 0 192 . 168 . 5 . 128 Broadcast Address: 1 1 0 0 0 0 0 0 . 1 0 1 0 1 0 0 0 . 0 0 0 0 0 1 0 1 . 1 0 1 1 1 1 1 1 192 . 168 . 5 . 191 $2^6 - 2 = 62$ usable addresses	255.255.255.192	192.168.5.128 - 192.168.5.191
LAN3	LAN3: /28 Network Address: 1 1 0 0 0 0 0 0 . 1 0 1 0 1 0 0 0 . 0 0 0 0 0 1 0 1 . 1 1 0 0 0 0 0 0 192 . 168 . 5 . 192 Broadcast Address: 1 1 0 0 0 0 0 0 . 1 0 1 0 1 0 0 0 . 0 0 0 0 0 1 0 1 . 1 1 0 0 1 1 1 1 192 . 168 . 5 . 207 $2^4 - 2 = 14$ usable addresses	255.255.255.240	192.168.5.192 - 192.168.5.207
LAN4	LAN4: /28 Network Address: 1 1 0 0 0 0 0 0 . 1 0 1 0 1 0 0 0 . 0 0 0 0 0 1 0 1 . 1 1 0 1 0 0 0 0 192 . 168 . 5 . 208 Broadcast Address: 1 1 0 0 0 0 0 0 . 1 0 1 0 1 0 0 0 . 0 0 0 0 0 1 0 1 . 1 1 0 1 1 1 1 1 192 . 168 . 5 . 223 $2^4 - 2 = 14$ usable addresses	255.255.255.240	192.168.5.208 - 192.168.5.223
PTP	Point-to-Point: <b>30</b> (/31) Network Address: 1 1 0 0 0 0 0 0 . 1 0 1 0 1 0 0 0 . 0 0 0 0 0 1 0 1 . 1 1 1 0 0 0 0 0 192 . 168 . 5 . 224 Broadcast Address: 1 1 0 0 0 0 0 0 . 1 0 1 0 1 0 0 0 . 0 0 0 0 0 1 0 1 . 1 1 1 0 0 0 1 1 192 . 168 . 5 . 227 $2^2 - 2 = 2$ usable addresses	255.255.255.252	192.168.5.224 - 192.168.5.227