Variable Length Subnet Mask (VLSM) Subnetting Cheat-sheet

Main Network: 192.168.0.0

1) Determine the number of hosts for each subnet

Department	Number of Hosts
Computer Science Lab	254
Web Design Lab	3
Networking Closet	2
Server Room	2

2) Assign the subnet mask with the most hosts needed a subnet mask first
   The Computer Science Lab requires the most hosts ∴ a / 24 subnet mask is required
3) Subnet the largest network with the main network address first
   192.168.0.0
   255.255.255.0
   1100 0000 1010 1000 0000 0000 0000 0000
   1111 1111 1111 1111 1111 1111 0000 0000
   1100 0000 1010 1000 0000 0000 0000 0000

   | 192 | 168 | 0 | 0 | Network address |
   | 192 | 168 | 0 | 255 | Broadcast Address |

4) Determine the subnet mask required for the next subnet
   The Web Design Lab requires 3 hosts
   192.168.1.0
   255.255.255.240

5) Subnet the network
   1100 0000 1010 1000 0000 0001 0000 0000
   1111 1111 1111 1111 1111 1111 1111 0000
   1100 0000 1010 1000 0000 0000 0000 0000

   | 192 | 168 | 1 | 0 | Network Address |
   | 192 | 168 | 1 | 15 | Broadcast Address |

6) Repeat steps 4 and 5 for all remain subnets