# IP Addressing Homework

## Reading

Read the CyberAces tutorial on network (IP) addressing and masking, slides 1 - 23. The CyberAces link is here: <https://www.sans.org/cyberaces/>. Go to Module 2, Networking, and scroll to Layer 3 - Network, Part 1: Addressing & Masking. You can also use the direct links:  
PDF: <https://assets.contentstack.io/v3/assets/blt36c2e63521272fdc/blt9d022e100e6022bf/625459e898a5e44ea7851729/CyberAces_Module2-Networking-Layer3-Part1-Addressing&Masking.pdf>   
Video: <https://youtu.be/k5h7DAEEfhw>

## Hand In

For each of the IP addresses and masks below, list the network address, broadcast address, and the available host addresses. The address you’ve been given could be a network, host, or broadcast address.

1. 192.168.1.0 255.255.255.0
   1. Network
   2. Broadcast
   3. Hosts
2. 192.168.52.138 255.255.255.0
   1. Network
   2. Broadcast
   3. Hosts
3. 200.72.6.255 255.255.255.0
   1. Network
   2. Broadcast
   3. Hosts
4. 156.99.165.17 255.255.0.0
   1. Network
   2. Broadcast
   3. Hosts

These problems are more difficult. You may use the calculator on <http://www.subnet-calculator.com/cidr.php>, although macho network engineers can do them in their heads ;-) Note that the calculator “CIDR address range” field includes the network and broadcast addresses, as well as the available host addresses.

1. 172.16.18.121 255.255.254.0
   1. Network
   2. Broadcast
   3. Hosts
   4. CIDR mask bits
2. 10.2.56.200 255.255.255.192
   1. Network
   2. Broadcast
   3. Hosts
   4. CIDR mask bits