

NETWORK ADDRESS ACTIVITY

Name: _____

Due Monday, February 27, at the beginning of class

1. Each network device has a unique MAC address.
 - a. How are MAC addresses commonly written? (That is, how many groups what kind of digits, separated by what?)

 - b. How many distinct MAC addresses are possible?

2. Find the MAC address of your computer or phone. Visit <http://www.wikihow.com/Find-the-MAC-Address-of-Your-Computer> for instructions for finding the MAC address for different operating systems. Write your MAC address here:

3. The common standard for IP addresses since the 1980s has been IPv4.
 - c. How are IPv4 addresses commonly written? (That is, how many groups what kind of digits, separated by what?)

 - a. How many distinct addresses are possible with IPv4? (Give an exact or approximate answer.)

 - b. There are about 7 billion people on earth. Are there enough IPv4 addresses for everyone?

4. Find the IPv4 address of your computer.
 - a. Visit <https://www.whatismyip.com>. What does this site report as the IPv4 address for your computer?
 - b. Now click *IP WHOIS Lookup* (on the left side of the page) to see who registered the IP address that you are learning. State a few things that this page tells you about your IP address:

5. Look up an IPv4 address of a remote server. Go to <https://whatismyip.com/dns-lookup>. Type the URL of your favorite web site into the search box, and click *Lookup*. Report the host name and the IP address that was found:
 - a. Host name:

 - b. IP address:

6. The internet is in transition to a new IP address standard known as IPv6.
 - d. How are IPv6 addresses commonly written? (That is, how many groups of how many digits, separated by what?)

 - e. How many distinct addresses are possible with IPv6? (Give an exact or approximate answer.)

 - f. There are about 7 billion people on earth. If IPv6 addresses were distributed evenly among everyone, about how many IPv6 addresses would each person have?