

## INTERNETWORK (IP) ASSIGNMENT

Name: \_\_\_\_\_

Due Monday, March 7, at the beginning of class

1. The common standard for IP addresses since the 1980s has been IPv4.
  - a. How are IPv4 addresses commonly written? (That is, how many groups of numbers, 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?
  
2. 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:
  
3. 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:

4. The internet is in transition to a new IP address standard known as IPv6.
- b. How are IPv6 addresses commonly written? (That is, how many groups of how many digits, separated by what?)
  
  
  
  
  
  
  
  
  
  
  - c. How many distinct addresses are possible with IPv6? (Give an exact or approximate answer.)
  
  
  
  
  
  
  
  
  
  
  - d. 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?