

40 pts

Name: _____

Class Day / Time: _____

Due Date: _____

Lab 3: The Internet

Go to <http://computer.howstuffworks.com/internet-infrastructure.htm>
Read 1 - 12. **Print out the following work sheet and fill in the blanks.**

Nobody owns the Internet, that doesn't mean it is not monitored and maintained in different ways. _____, a non-profit group, oversees the formation of the policies and protocols that define how we use and interact with the internet.

Every computer that is connected to the Internet is part of _____. You may use a modem and dial a local number to connect to _____. At work, you may be a part of _____, but you most likely still connect to the Internet using an ISP that your company has contracted with. When you connect to your ISP, you become part of their network. The ISP may then connect to a larger network and become part of their network. The Internet is simply a _____.

Every machine on the Internet has a unique identifying number, called _____. The IP stands for _____, which is the language that computers use to communicate over the Internet.

IP addresses are considered _____-bit numbers. Since each of the eight positions can have two different states (0 or 1), the total number of possible combinations per octet is ____ or _____. So each octet can contain any value between ____ and _____. Combine four octets and you get _____ or _____ unique values!

Let's say that you type the URL www.howstuffworks.com into your browser. The browser contacts a _____ to get the _____. All of the machines on the Internet are either _____ or _____. The machines that provide services to other machines are _____. And the machines that are used to connect to those services are _____. There are _____ servers, _____ servers, _____ servers and so on serving the needs of Internet users all over the world.

When you connect to www.howstuffworks.com to read a page, you are a user sitting at a _____ machine. You are accessing the HowStuffWorks _____. The server machine _____ the page you requested and _____ to you.

A server has a _____ that does not change very often. A home machine that is dialing up through a modem, on the other hand, typically has an IP address assigned by _____ you dial in. That IP address is unique for _____ -- it may be _____ the next time you dial in. This way, an ISP only needs one IP address for each _____ it supports, rather than one for each _____.

Any server machine makes its services available using numbered _____ -- one for each service that is available on the server. For example, if a server machine is running a Web server and a file transfer protocol (FTP) server, the Web server would typically be available on port _____, the FTP server would be available on port _____. Clients connect to a service at a specific IP address and on a specific port number.

Once a client has connected to a service on a particular port, it accesses the service using a specific _____. Protocols are often text and simply describe how the client and server will have their conversation. Every Web server in the Internet conforms to the _____.