Answers to Even-numbered Exercises

2. Describe two ways to find out who is logged in on some of the other machines attached to your network.

   Use rsh, ssh, or telnet to connect to and run w or who on each host.

   Use finger.

   Log in on the console of each host and run w or who.

4. A software implementation of chess was developed by GNU and is available for free. How can you use the Internet to find and download this program?

   Use a search engine to find **GNU chess** and download the software from an appropriate site. Alternatively, go to the GNU home page and find the page that you can download the software from.

6. If you have access to the World Wide Web, answer the following questions.

   a. Which browser do you use?

      System/user dependent, frequently Chrome or Firefox.

   b. What is the URL of the author of this book's home page? How many links does it have?

      The URL is www.sobell.com; the number of links varies.

   c. Does your browser allow you to create bookmarks? If so, how do you create a bookmark? How can you delete one?

   Browser dependent.

8. What is the fully abbreviated form of the IPv6 address 2620:0100:e000:0000:0000:0000:0000:8001?

   2620:100:e000::8001

10. Suppose the link between routers 1 and 2 is down in the Internet shown in Figure 8-1 on page 295. What happens if someone at site C sends a message to a user on a workstation attached to the Ethernet cable at site A? What happens if the router at site A is down? What does this tell you about designing network configurations?

    Instead of traffic going from site C to router 1 to router 2 and then to site A, traffic goes from site C to router 1 to router 3 to router 2 and then to site A.

    Network configurations are flexible and adaptive if redundancy has been designed in from the start.

12. Suppose you have 300 hosts and want to have no more than 50 hosts per subnet. What size of address block should you request from your ISP? How many /24 addresses would you need? How many subnets would you have left over from your allocation?

    The next largest subnet above 50 that is a power of 2 is 64 addresses. Because 300/50 is 6, 6 subnets of 64 would be about 2 /24-equivalent networks. The subnet mask is 255.255.255.192 or /26. There would be 2 subnets left over.

14. Use ssh to connect to a remote system on the local LAN using the remote system's autoconfigured link-local IPv6 address. (*Hint:* To specify the network interface to use for link-local addresses, append **%IFNAME** to the end of the address, where **IFNAME** is the local operating system's name for the interface.

    Give the command **ifconfig** or **ip addr** on the remote system to determine its IPv6 link-local address. Then use ssh to connect to that address, using the hint. An **Invalid argument** error message means you did not specify the interface. Following is an example:

    ```
    $ ssh username@fe80::1234:5678:dead:beef%eth0
    ```