47. For the network given in Figure 3.54, give global distance–vector tables like those of Tables 3.10 and 3.13 when
(a) Each node knows only the distances to its immediate neighbors.
(b) Each node has reported the information it had in the preceding step to its immediate neighbors.
(c) Step (b) happens a second time.

48. For the network given in Figure 3.53, show how the link-state algorithm builds the routing table for node D.

49. Use the Unix utility traceroute (Windows tracert) to determine how many hops it is from your host to other hosts in the Internet (e.g., cs.princeton.edu or www.cisco.com). How many routers do you traverse just to get out of your local site? Read the man page or other documentation for traceroute and explain how it is implemented.

50. What will happen if traceroute is used to find the path to an unassigned address? Does it matter if the network portion or only the host portion is unassigned?