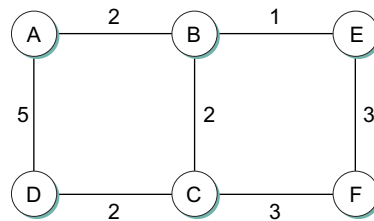


■ FIGURE 3.53 Network for Exercises 46, 48, and 54.

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



■ FIGURE 3.54 Network for Exercise 47.

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