14

Use Dijkstra’s algorithm to find the shortest path from a to z for each of the graphs in 13-16. In each case make tables similar to Table 10.7.1 to show the action of the algorithm.

*b* 1 *c* 1 *d*

* •

*a*• 7 8 •*z*

* •

*e* 1 *f* 1 *g*

Reference:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Step** | **V(T)** | **E(T)** | ***F*** | ***L(a)*** |
| 0  1  2  3  4  5  6 | {*a*}  {*a*}  {*a, b*}  {*a, b, c*}  {*a, b, c, e*}  {*a, b, c, e, d*}  {*a, b, c, e, d, z*} | {{*a, b*}}  {{*a, b*}, {*a, c*}}  {{*a, b*}, {*a, c*}, {*c, e*}}  {{*a, b*}, {*a, c*}, {*c, e*}, {e, d}}  {{*a, b*}, {*a, c*}, {*c, e*}, {e, d}, {e, z}} | {*a*}  {*b, c*}  {*c, d, e*}  {*d, e*}  {*d, z*}  {*z*} | 0  0  0  0  0  0 |