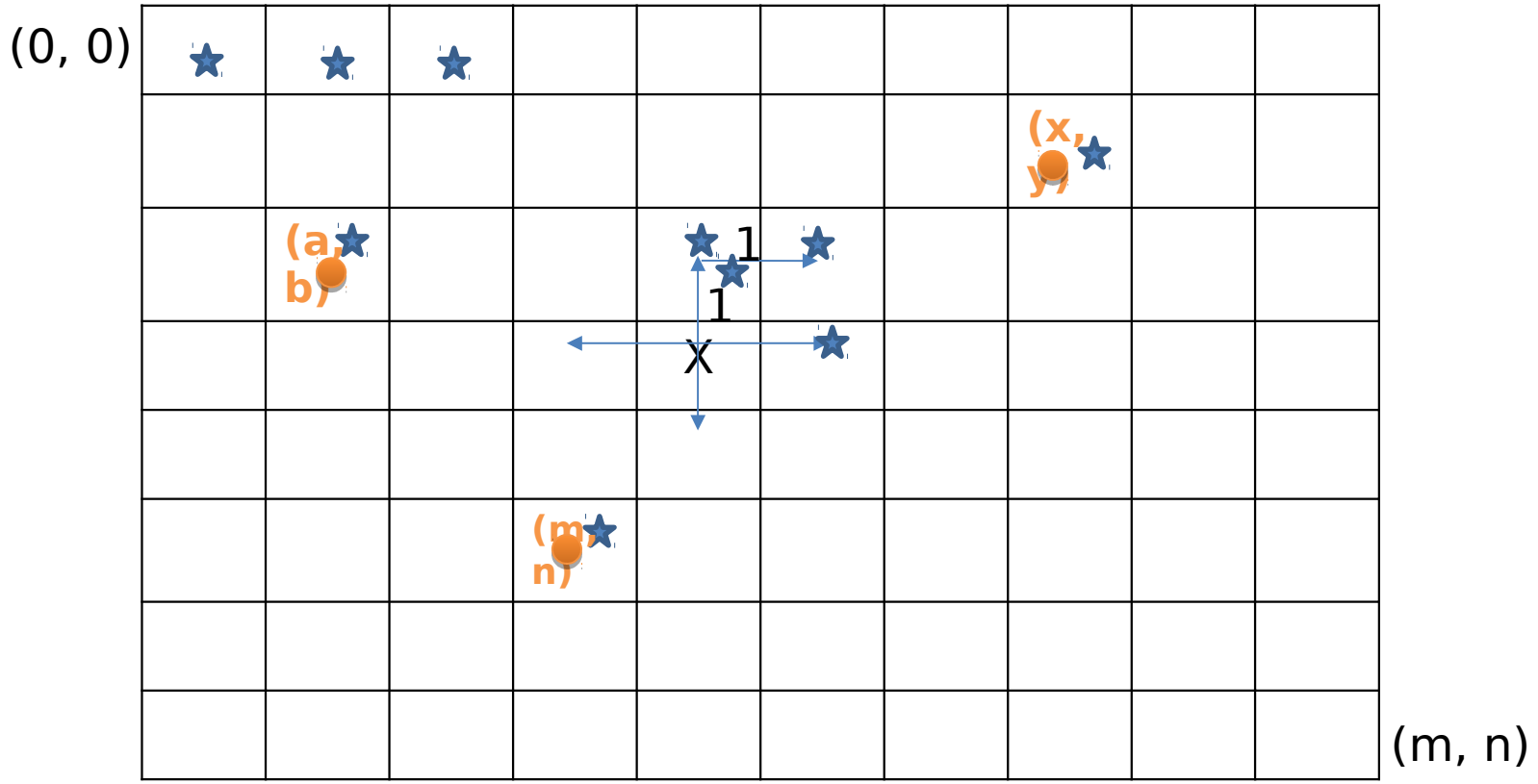
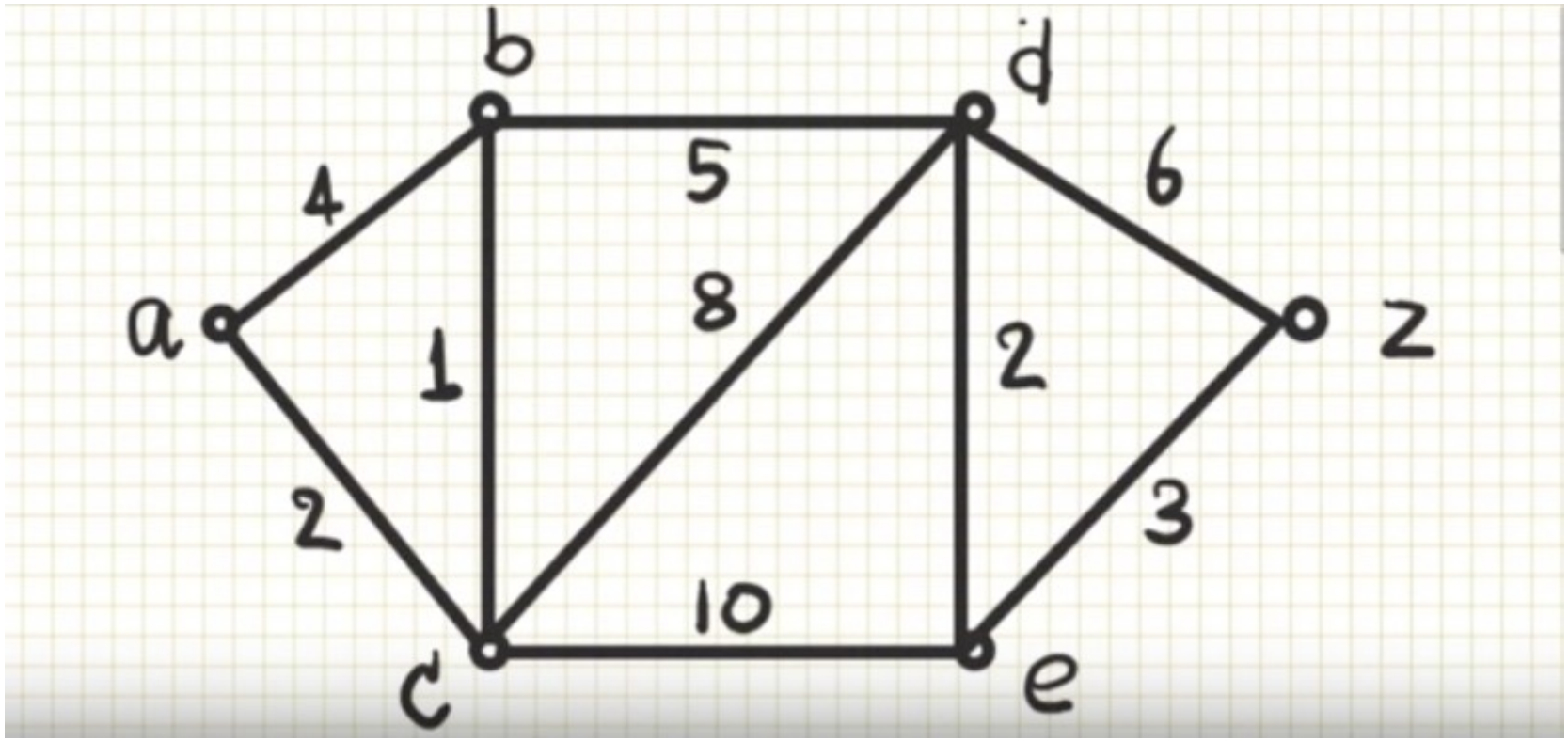
1. A galaxy of stars in matrix form. Each star is at 1-point distance from another
2. Spaceship has to move from pos(x1,y2) to pos(x2,y2).
3. Spaceship can travel only in horizontal or vertical direction
4. At W locations, wormholes exist along with stars. Using the wormhole allows instant (0-point) travel between 2 locations
5. Find the optimal path to travel between (x1,y1) and (x2,y2)
6. 5 < M,N < 1000000



1 -> (Number of test cases)
10 50 1 -> (M, N, W)
0 0 10 20 -> (X1, Y1, X2, Y2)
5 5 10 10 -> Wormhole which is at (5,5) and can move to (10, 10) instantaneously


b
d
4
5
6
a
8
z
1
2
2
3
10
c
e

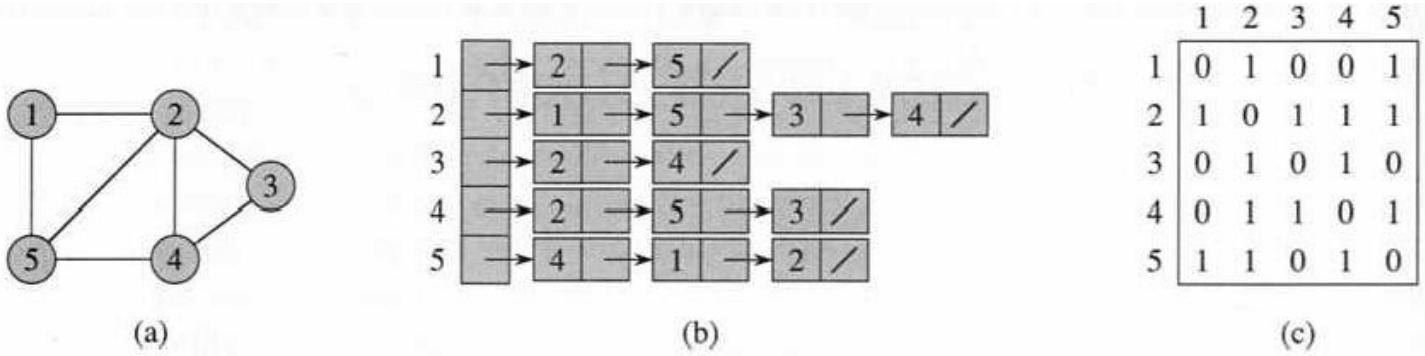


Figure 22.1 Two representations of an undirected graph. **(a)** An undirected graph G having five vertices and seven edges. **(b)** An adjacency-list representation of G. **(c)** The adjacency-matrix representation of G.

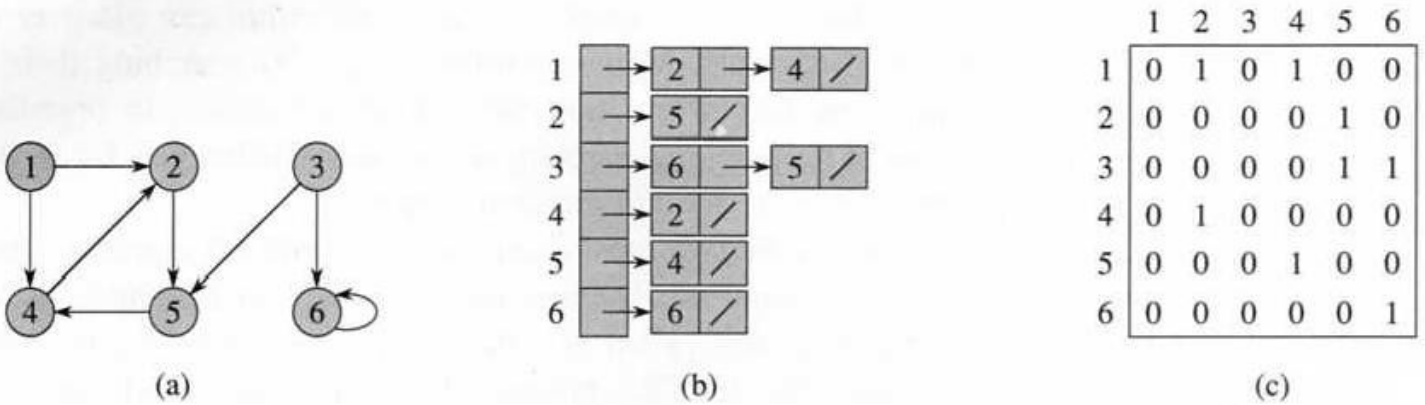


Figure 22.2 Two representations of a directed graph. **(a)** A directed graph G having six vertices and eight edges. **(b)** An adjacency-list representation of G. **(c)** The adjacency-matrix representation of G.