1. Trace the execution of Dijkstra's algorithm to find the shortest path from Philadelphia to the other cities shown in the following graph.

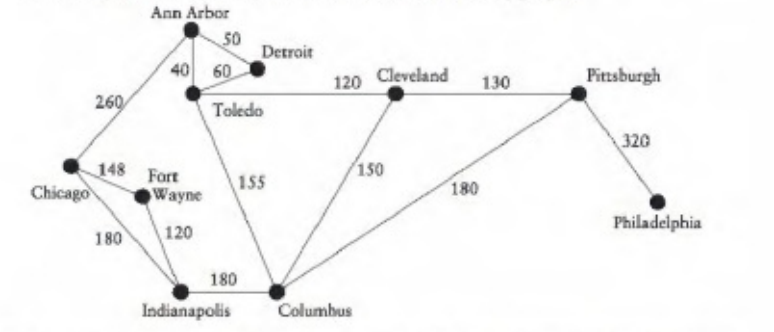
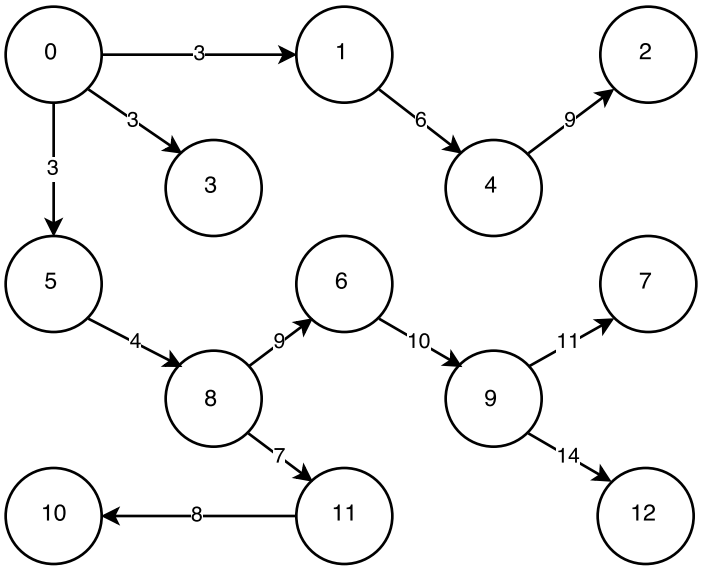


Table		
City	**d[v]**	**p[v]**
Ph	0	null
Pi	320	***Ph***
Cl	450	***Pi***
Co	500	***Pi***
To	570	***Cl***
De	630	***To***
An	610	***To***
In	680	***Co***
Fo	800	***In***
Ch	970	***An***

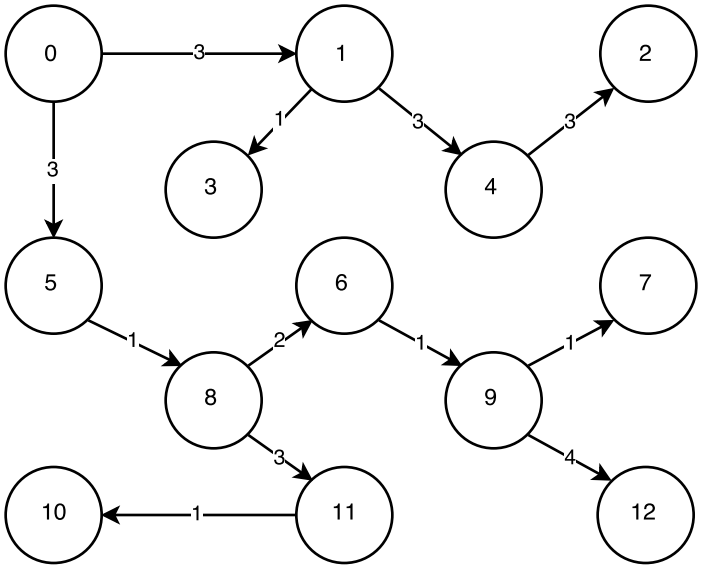
S = {Ph}

V-S = {Pi, Cl, Co, To, De, An, Fo, Ch}

2. Trace the execution of Dijkstra's algorithm to find the shortest paths from vertex 0 to the other vertices in the following graph.



3. Trace the execution of Prim's algorithm to find the minimum spanning tree for the graph shown in Exercise 2.



4. Trace the execution of Prim's algorithm to find the minimum spanning tree for the graph shown in Exercise 1.