Instructions: For each group (groups are separated by horizontal lines), match term or quantity in left column to descriptions that apply from the numbered columns. There may be more than one match that is possible, and you might not use all the numbered items in each group. The last group is just True/False.

---

transit routes in a city over streets __1__

mailboxes on houses and sidewalks __1__

mail dropboxes (where mail is picked up by carrier) and streets __2__

parking meters and sidewalks (walking parking patrol) __1__

cities and highways that connect them __2__

parking meters and streets (parking patrol with a vehicle) __1__

flower gardens with benches __1__

snow removal on streets __1__

cities and flight paths that connect them __2__

1. the important aspect of the network is along the route (edges)
2. the important aspect of the network is finding the best way to visit all the points of interest (vertices)

---

graph __6__

vertex __2__

edge __5__

valence __9__

path __7__

circuit __12__

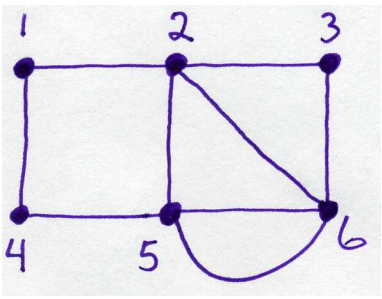
connected graph __8__

euler circuit __10__

optimal solution __1__

1. the best method for solving a problem
2. where edges end in a graph
3. the number of edges in a graph
4. the number of vertices in a graph
5. connecting links joining vertices
6. a finite collection of edges and vertices
7. connected series of edges showing a route on the graph
8. every pair of vertices has a path connecting them
9. the number of edges entering a vertex
10. a circuit that covers every edge in a graph only once
11. adding edges to a graph to make all valences even
12. connected series of edges showing a route on the graph that begins and ends at the same vertex

---



1. The valence of vertex 4 is 2 ..... [T] F
2. This graph is connected ..... [T] F
3. This graph has an euler circuit ..... [T] F
4. This graph has a circuit 4,5,1,2,3,6,5,4 (listing vertices traveled) .. T [F]
5. This graph has a path 4,5,1,2,3 ..... T [F]
6. It is impossible to create an euler circuit if you start at vertex 1 .. T [F]
7. This graph has a path 5,4,1,2,3 ..... [T] F
8. The circuit 5,6,5,2,6,3,2,1,4,5 is an euler circuit ..... [T] F
