SECTION 15.2

Group work

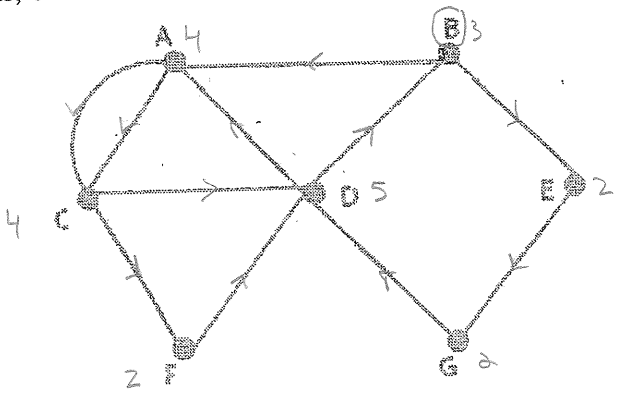
Path Paper

Examples:

1. A connected graph is described. Determine whether the graph has an Euler path (but not an Euler circuit), an Euler circuit, or neither an Euler path nor an Euler circuit. Explain your answer.
   a. The graph has 70 even vertices and no odd vertices. Path and Circuit
   b. The graph has 88 even vertices and two odd vertices. 1 path
   c. The graph has 65 even vertices and four odd vertices. No path or circuit

2. Use the graph shown to indicate whether the following are Euler paths, Euler circuits, or neither. If so, name one.

   a.



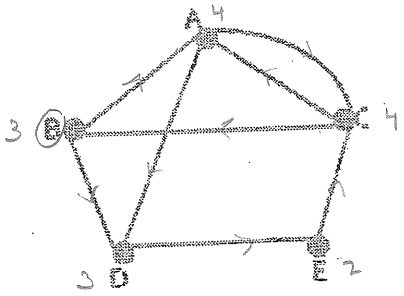
2 odd, 1 path

B E G D B A C F

D A C D

3. For each graph given, determine whether the graph has an Euler path, an Euler circuit, or neither. Also, if the graph has an Euler path or circuit, use trial and error or Fleury's algorithm to find one.

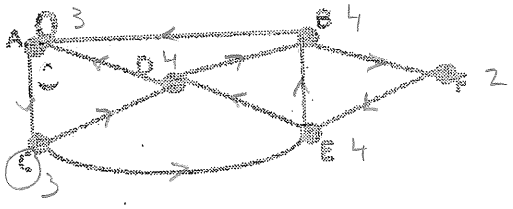
   a.



2 odd, 1 path

B A C A D E C B D

   b.



2 odd, 1 path

C D B A C E B F E D A

Section 15.2 continued

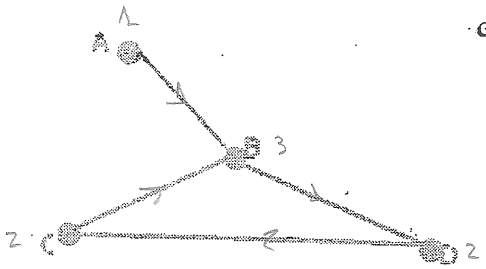
c. 2 odd, 1 path

A B D C B

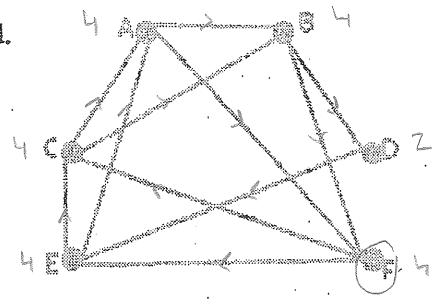
d. ∅ odd circuit

F E C A B D E A F C D F

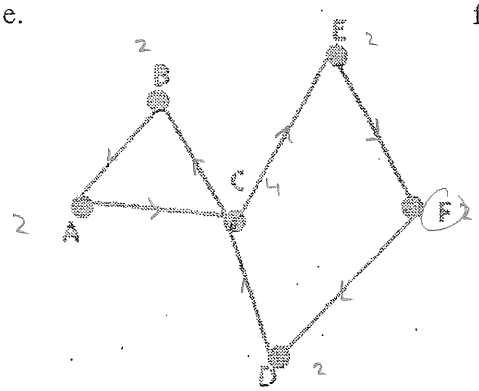
c.



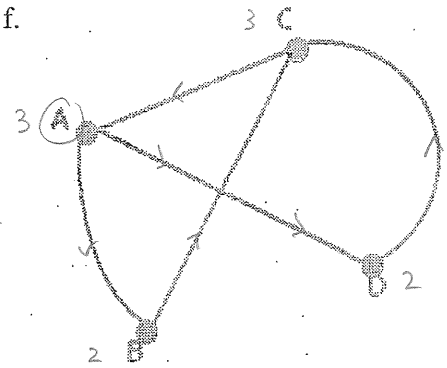
d.



e.



f.



e. ∅ odd, circuit

F D C B A C E F

f. 2 odd, path

A D C A B C