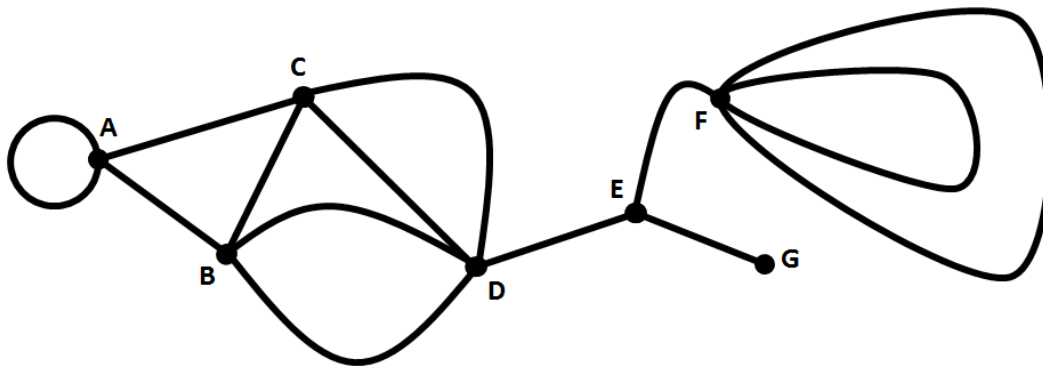# GRAPH THEORY: TRACABLE GRAPHS [PIRNOT 4.1]

EX 4.1.1: Consider the following graph:
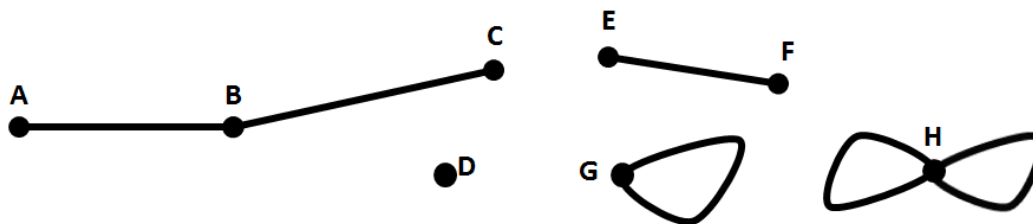

(a) Is the graph connected?

(b) Determine the degree of each vertex:

$\deg(A) = \qquad \deg(B) = \qquad \deg(C) = \qquad \deg(D) = \qquad \deg(E) = \qquad \deg(F) = \qquad \deg(G) =$

(c) Which vertices are odd?

(d) Which vertices are even?

(e) Can the graph be traced?

    (i.e. does the graph have an Euler circuit or Euler path?)
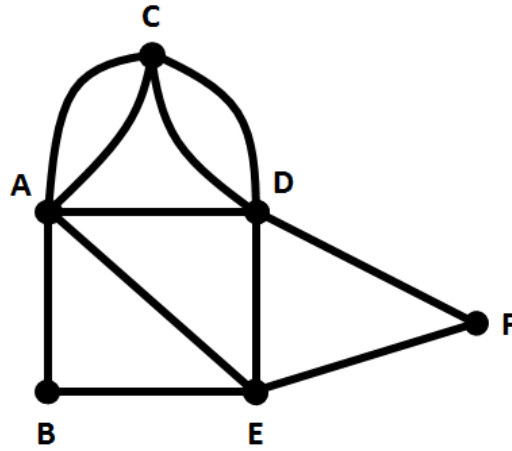

EX 4.1.2: Consider the following graph:

(a) Is the graph connected?

(b) Determine the degree of each vertex:

$\deg(A) = \qquad \deg(B) = \qquad \deg(C) = \qquad \deg(D) = \qquad \deg(E) = \qquad \deg(F) = \qquad \deg(G) = \qquad \deg(H) =$

(c) Which vertices are odd?

(d) Which vertices are even?

(e) Can the graph be traced?

    (i.e. does the graph have an Euler circuit or Euler path?)

EX 4.1.3: Draw a **connected** graph with four odd vertices & five even vertices. (Labeling vertices not necessary)

Consider the following graph:

(a) Determine the degree of each vertex:

$\deg(A) =$ $\deg(B) =$ $\deg(C) =$ $\deg(D) =$ $\deg(E) =$ $\deg(F) =$

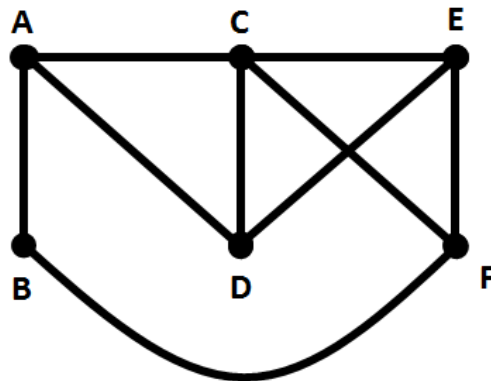(b) Which vertices are odd?

(c) Which vertices are even?

(d) Can the graph be traced?

   (i.e. does the graph have an Euler circuit or Euler path?)

   If so, trace the graph (by numbering each successive edge 1,2,3,...)

EX 4.1.5: Consider the following graph:

(a) Determine the degree of each vertex:

$\deg(A) =$ $\deg(B) =$ $\deg(C) =$ $\deg(D) =$ $\deg(E) =$ $\deg(F) =$
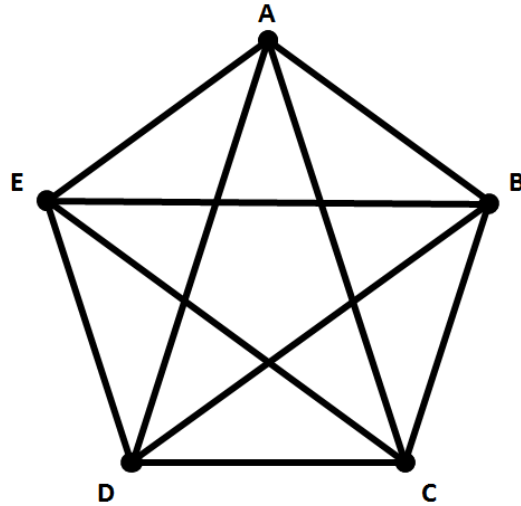
(b) Which vertices are odd?

(c) Which vertices are even?

(d) Can the graph be traced?

   (i.e. does the graph have an Euler circuit or Euler path?)

   If so, trace the graph (by numbering each successive edge 1,2,3,...)

Consider the following graph:

(a) Determine the degree of each vertex:

$$\deg(A) = \qquad \deg(B) = \qquad \deg(C) = \qquad \deg(D) = \qquad \deg(E) =$$

(b) Which vertices are odd?

(c) Which vertices are even?

(d) Can the graph be traced?

(i.e. does the graph have an Euler circuit or Euler path?)

If so, trace the graph (by numbering each successive edge 1,2,3,...)