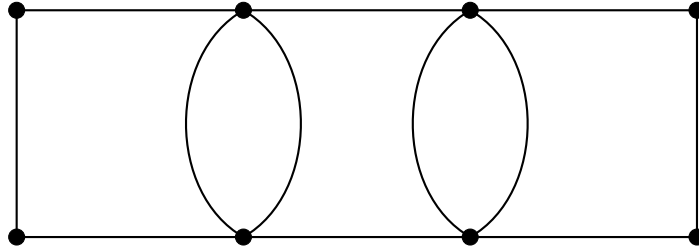


1. A graph is a mathematical object which is defined by the following two pieces of information:

\_\_\_\_\_

2. (a) In the following graph: What is the number of vertices? The number of edges? Is the graph connected? Does each vertex have even valence? Is there an Euler circuit in this graph?



Vertices: \_\_\_\_\_ Edges: \_\_\_\_\_ Connected: \_\_\_\_\_

Even Valence: \_\_\_\_\_ Euler Circuit: \_\_\_\_\_

- (b) If the above graph does have an Euler circuit, find it. If it does not, explain why not. (You may use a theorem from class, but you must say why the theorem does or does not hold.)

3. Is the graph from Question 2(a) the same as the following graph? Why or why not?

