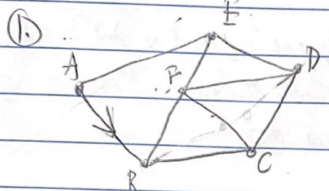


Jacob Moore

HW 7

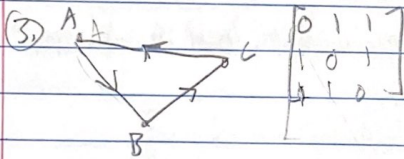
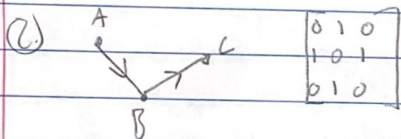
11/14/21



0	1	0	0	1	0
1	0	1	0	0	1
0	1	0	1	0	1
0	0	1	0	1	1
1	0	0	1	0	1
0	1	1	1	0	0

Our graph has no Eulerian path nor cycle because there are 4 odd vertices.

□



(4) In simple terms, you can traverse an edge only once, and for a Eulerian cycle you must start and end at the same vertex. Thus, every vertex must have one "entrance" and one "exit".  
If the vertex is odd you cannot finish at the same vertex you started from.

(5) Suppose we have a graph with an Euler path P. Other than the starting and ending vertices, P enters v and leaves v s times. Therefore, there are 2s edges that have endpoints v. So all vertices other than the two endpoints must be even vertices.