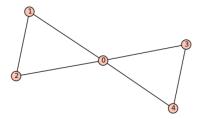
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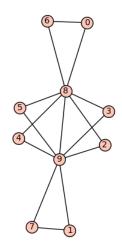
## LARSON—MATH 356—CLASSROOM WORKSHEET 15 Euler Circuits, Chromatic Number, Bipartite Graphs

## Review

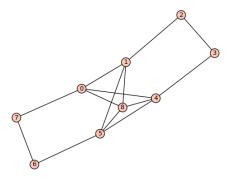
- (Claim:) A non-trivial tree (a tree with at least two vertices) has a leaf.
- (Claim:) There is a unique path between any pair of vertices in a tree.
- What is an Eulerian circuit in a graph?



1. Can you find an Eulerian circuit in the above graph?



2. Can you find an Eulerian circuit in the above graph?



3. Can you find an Eulerian circuit in the above graph?

	(Claim:) A connected graph has an Eulerian circuit if and only if every vertex has even degree.
5.	What is a coloring of a graph? What is a proper coloring?
6.	What is the <i>chromatic number</i> $\chi(G)$ of a graph $G$ ?
7.	What is a bipartite graph?
8.	Why are trees bipartite?