**Given an undirected graph, explain how you can determine whether it is a tree or not. What would be the running time?**

We can also make a DFS or BFS traversal from a vertex in the graph. If we find a vertex that was already visited that is not the parent, then there is cycles. If there are no cycles and all vertices are found, then the graph is a tree.

DFS has a linear time complexity, and since you visit each vertex and edge once, the overall time complexity is O(n).