Running Times for Graph Data Structure

CS361 Homework 4

State the worst-case running time for each method in your Graph class in Big-O notation. This requires you to examine the code you wrote for each method. **You will also need to find the running times for the various methods you called on Java containers (e.g. ArrayList, HashMap). The running time is usually specified in the corresponding Java API.**

* NumVertices() O(1)
* numEdges() O(n)
* clear() O(1)
  + Is O(1) due to just conducting a malloc
* addVertex(V v) O(1)
* addEdge(V u, V v) O(1)
* getVertices() O(1)
* getNeighbors(V v) O(1)
* containsVertex(V v) O(1)
* edgeExists(V v, V u) O(1)
* degree(V v) O(1)
* toString() O(1)