1. The Graph class has an *accessor* function that returns the number of edges: int E(), and an *accessor* function that returns the number of vertices : int V(). However, the class has a private variable to keep track of the number of edges only (*nedges*), which is increased every time an edge is added to the graph. Why is it that don’t we need a variable to keep track of the number of vertices? How can we quickly know the number of vertices in the graph?

Answer = The vertices are stored in a vector and every vector has a size property.

1. What is the *big-O* time for displaying the graph (the overloaded output operator)?

Answer = Big O(v)

1. What would be the *big-O* time for displaying the graph (overloaded output operator) if a matrix representation had been used?

Answer = Big O(E)