

Name: \_\_\_\_\_

1. How much space is used when representing a graph with  $n$  vertices and  $m$  edges using an:

(a) Adjacency Matrix, (b) Adjacency List.

*Give your answers using  $O$ -notation and briefly justify.*

2. How much time does it take to determine if there is an edge between two vertices in a graph with  $n$  vertices and  $m$  edges when the graph is represented using an:

(a) Adjacency Matrix, (b) Adjacency List.

*Give your answers using  $O$ -notation and briefly justify.*