

Name & Student Number:

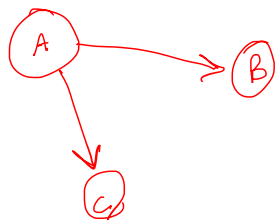
1. For linear search in a list, which data structure (between an array list and a linked list) is likely to give a faster result? Why?

*Array. Due to spatial locality*

2. When your program needs to access a value in a particular memory address, list the memory layers **in the order** in which they are queried/accessed by the operating system? [Memory layers: Disk, RAM, CPU register, L2 Cache, L1 Cache]

*CPU registers, L1 cache, L2 cache, RAM, Disk*

3. Draw a graph with three nodes such that exactly two topologically orderings.



4. Draw a graph with 5 nodes that has two strongly connected components

