

Memory Diagram Examples

Question C: Memory Diagram <16 marks>

Consider the following app:

```
1 import java.lang.Math;
2
3 public class MyApp {
4
5     public static void main(String[] args) {
6         double val;
7         val = Math.PI;
8     }
9
10 }
```

C-1. [2 marks] Was the import statement on the first line necessary? Explain why or why not.

C-2. [2 marks] When you are asked to draw a memory diagram, what is the diagram actually representing, in terms of the real-world. Be specific.

C-3. [2 marks] In the case of the app above, how does the virtual machine know that the class MyApp will require the services of the class Math at run time?

C-4. [2 marks] Give a general overview of what happens in the JVM upon invocation of an app.

C-5. [2 marks] Draw a memory diagram to show the contents of memory upon invocation of the program and up to **but not including line 6** of the example.

C-6. [2 marks] Draw a memory diagram to show the contents of memory upon invocation of the program and up to **and including line 6** of the example.

C-7. [2 marks] Draw a memory diagram to show the contents of memory upon invocation of the program and up to **and including line 7** of the example.