Practical 2

Louise Poole, Martin Simango, Matt Doherty

**Task 3**

1. The short circuit method deals with a Boolean expression that is made out of multiple separate expressions by evaluating each individual expression one at a time and, only if that expression evaluates to being true, will it move to evaluate the next expression (else it immediately jumps out of the loop as soon as it encounters a Boolean expression evaluating to false). This program, however, evaluates ALL of the expressions within the Boolean condition of the while loop and then, only after that, checks if all of them have been evaluated to true.

**Task 4**

With asm1.exe, sieve1.pvm took 0.65 seconds to run whereas with asm2.exe, sieve1.pvm took 0.21 seconds. These results are as expected due to asm1 using PVMPushPop.cs whereas asm2 uses PVMInLine.cs. PVMInLine.cs directly manipulates memory and so executes faster than PVMPushPop.cs, which uses helper functions in order to manipulate memory. Using helper functions forces time to be spent on both setting up those functions and calling them every single time memory needs to be accessed and/or altered. Needing to do those extra steps with using functions adds up to a lot of extra time overall, resulting in the clear difference between the two.