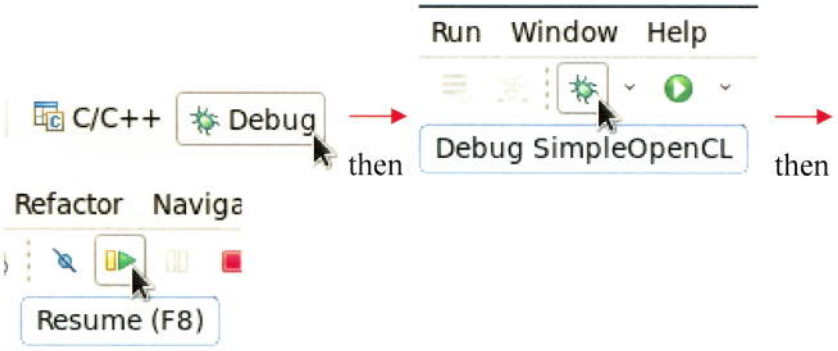
Step 3. Run and debug the kernel

____ 1. Right-click the project name in the **Project Navigator** pane and select Clean Project, then Build Project to compile the project.

____ 2. Correct any errors that result from the compilation in your code until the build is completed.

____ 3. Run the program. Switch to the **Debug** perspective in Eclipse by clicking the button that says Debug at the top right. Then, click the bug icon near the **Window** menu item, then the green triangle with the yellow vertical bar beside it.



____ 4. When the program runs, you should see performance results in the **Console** tab, as well as the "VERIFICATION PASSED!!!" message, along with some samples of results.

The Verification Passed message means the contents of Z and CalcZ are the same. You can also verify that the sample of results matches the math operation you've performed.

```
Console  Tasks  Problems  Executables
<terminated> SimpleOpenCL [C/C++ Application] SimpleOpenCL
Platform Number: 0
Platform Name: Intel(R) FPGA SDK for OpenCL(TM)
Platform Profile: EMBEDDED PROFILE
Platform Version: OpenCL 1.0 Intel(R) FPGA SDK for OpenCL(TM), Version 17.1
Platform Vendor: Intel(R) Corporation

Device Number: 0
Device Name: EmulatorDevice : Emulated Device
Device Vendor: Intel(R) Corporation
Is Device Available?: 1
Is Device Little Endian?: 1
Device Max Compute Units: 1
Device Max Work Item Dimensions: 3
Device Max Work Group Size: 2147483647
Device Max Frequency: 1000
Device Max Mem Alloc Size: 16859439104


Launching the kernel...


VERIFICATION PASSED!!!

Some Sample of Results
-----------------------------------
Index 0: Input 1 is 840.187683, Input 2 is 394.382904, Result is 331355.656250
Index 819: Input 1 is 178.313919, Input 2 is 60.155670, Result is 10726.593750
Index 1638: Input 1 is 786.326111, Input 2 is 210.920334, Result is 165852.171875
Index 2457: Input 1 is 191.929123, Input 2 is 51.216774, Result is 9829.990234
Index 3276: Input 1 is 166.614273, Input 2 is 678.101318, Result is 112981.359375
Index 4095: Input 1 is 835.887024, Input 2 is 682.699341, Result is 570659.500000
```

____ 5. If you have run-time errors or the verification fails, use breakpoints and stepping to debug your host program. To debug your kernel, you can add printf statements within it, which will print out to the console. Remember to compile your kernel in the terminal with aoc if you change it.