# Pointers and Functions Worksheet

This worksheet aims to cover how parameters are passed into functions.

1: Write two functions, add and subtract. Save them into a .cpp file, create an appropriate .h file, include this header file (#include “whatever.h”; ) into your main program.

2: Write a function that calculates tax rate. Two parameters, one optional. Price and tax rate. Pass in a price and the function should add 20% (default) to it. Passing in both price and tax rate should use the supplied tax rate to calculate the new price.

3: Create a function that displays a triangle of characters. Use default parameters, by default it should display a 5 triangle of \*, passing in parameters should alter this behaviour. Display character and size:

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|  |  |

4: Write a function that swaps two variables. Pass the variables in by reference (pointers to the variables) then swap the values.

5: Write functions that demonstrate pass by value and pass by reference for:

* int
* char
* bool
* double
* float
* structure (e.g. a vector)

6: Investigate the difference between pass-by-pointer and pass-by-reference.

7: Write a bubble sort function.

Test it works

Measure execution time of your sort function