# Task 3.1P Answer Sheet

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1. How many Counter objects were created?

A total of 2, because counter[0] = counter [2]

## Variables declared in main() are different to the objects created when we call new. What is the relationship between the declared variables in main and the objects created?

Variables points to objects.

1. Resetting the counter in myCounters[2] also changes the value of the counter in myCounters[0]. Why does this happen?

myCounter[2] and myCounter[0] are pointing to the same Counter, is because we assigned the same references to both of them

## The key difference between memory on the heap compared to the stack and the heap is that the heap holds dynamically allocated memory. What does this mean ?

Dynamic memory allocation means the memory is allocated during runtime

## On which are objects allocated (heap or stack) ? On which are local variables allocated (heap or stack) ?

Objects are allocated on the heap

Local variables are allocated on the stack

1. What does the new() method do when called for a particular class What does it do and what does it return?

When new is called on a class it allocates memory and initializes it then it returns an address to that location in memory

## Draw a diagram showing the locations of the variables and objects in main.

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