Worksheet: Arrays Practice

1. Write the statement that will declare a variable and initialize it to an array:

a)	of five integers and initialize it with values 1 through 5	
b)	of ten `doubles`, all initialized to `0.0`	
c)	of `String` array containing three English names	

2. Write a `for` loop that changes every element in an array, `arr`, to its square.

3. Write an **enhanced `for`** loop that prints all the elements of an array of `String`, `arr`, in order.

4. Write a `for` loop that prints all the elements of an array, `arr`, in reverse order.

5. Write a `for` (not enhanced `for`) loop that calculates a sum of all the elements of `arr`, an array of `double`.

6. Write an **enhanced `for`** loop that calculates an average of all the elements of `arr`, an array of `double`.

7. Write code that will shift all elements in an `int` array, `arr`, one position to the left, with the first element becoming the last. You can assume the precondition that the array has at least one element.

8. Fill in the trace table for the code. Then on the lines below, explain what the code does to the array.

```
int[] arr = { 3, 8, -1, 2, 6 };
int last = arr [ arr.length-1 ];
for(int i=arr.length-1; i>=1; i--)
{
   arr[i] = arr[i-1];
}
arr[0] = last;
```

		arr[i]				
last	i	0	1	2	3	4
		3	8	-1	2	6

b) Explain what the code above does to the array.

c) Explain what would happen if the `for` loop condition was: `i>=0`

9. Write method `swap` that will swap the position of two elements of the array. This method is to have no return value, and take three parameters: the integer array containing the elements to swap, and the two indexes of the elements to swap.