Quiz: Iteration and Arrays

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

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

2. Without using the `Math` library, and given the method header, write a `for` loop that calculates the power of the base: `answer = base`$^{\texttt{exponent}}$. Do not print any output.

```
1 public static double pow(double base, int exponent) {
2      double answer = base;









    return answer;
}
```

3. 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.

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

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5. Write a `for` loop that changes every element in an array of `double`, `arr`, to its square root.

6. Write a `for` loop that searches the array, `arr`, in reverse order to find and return the index of the last element in the array that matches `value`, or `-1` if the element is not found in the array.

```
1 public static int linearSearchReverse(String[] arr, String value) {




}
```

7. Study the following code for method `modifyArray`.

```
1 public static void modifyArray(int[] arr) {
2    for(int i=1; i < arr.length-1; i++) {
3       arr[i+1] = arr[i] + arr[i+1];
4    }
5 }
```

a) Given the value of `arr = {10, 20, 30, 40, 50}`, complete the trace table.
You may not need all the rows of the table.

values at the start of each loop (line 2)				`arr` at the end of the each loop				
`i`	`arr[i]`	`arr[i+1]`	`arr[i]+arr[i+1]`	`[0]`	`[1]`	`[2]`	`[3]`	`[4]`