1a) How does the correctness proof for countZeros work (Exercise 1 from Chapter 19 Program Correctness Proofs reading)?

1b) What happens if index = index + 1 is replaced by index = index + 2 and how is this reflected in the correctness proof?

1c) How would you prove that countZeros never goes into an infinite loop?

```java
1:   int countZeros(int array L) {
2:       postcondition: returns number of zero elements in L
3:       int count = 0;
4:       int index = 0;
5:       while (index < L.length()) {
6:           if (L[index] == 0) {
7:               count = count + 1;
8:           }
9:           index = index + 1;
10:       }
11:       return count;
12:   }
```
2) a) Using pseudo-code and assuming the function `random()` returns a random integer, sketch a program that would randomly test the countZeros method.

b) How are you handling the `test oracle` issue?