8 A program is required to test the fairness of the random number generator.

The one-dimensional (1D) array `RandomNumber[]` is used to store 100 000 random integers.

The two-dimensional (2D) array `CountedNumber[]` is used to store the integers 1 to 10, inclusive, and the frequency of each integer (the number of times each integer was generated).

Write a program that meets the following requirements:

- Generate 100 000 random integers between 1 and 10, inclusive.
- Store each integer in the appropriate array.
- Calculate the frequency of each of the integers 1 to 10 and store these values in the appropriate array.
- Sort the contents of the counted number array in **descending order** of frequency.
- Calculate the chance of generating each of the integers 1 to 10, rounded to four decimal places.
  Use the formula: chance = frequency / 100000
- Output each of the integers 1 to 10 in the order they are stored in the counted number array, along with the chance of generating them.

The following is an example of an algorithm that sorts a 2D array in an ascending order:

```
F ← TRUE
WHILE F DO
    F ← FALSE
    FOR I ← 1 TO 9
        IF A[I, 2] > A[I + 1, 2]
          THEN
            T1 ← A[I, 1]
            T2 ← A[I, 2]
            A[I, 1] ← A[I + 1, 1]
            A[I, 2] ← A[I + 1, 2]
            A[I + 1, 1] ← T1
            A[I + 1, 2] ← T2
            F ← TRUE
        ENDIF
    NEXT I
ENDWHILE
```

You must use pseudocode or program code **and** add comments to explain how your code works.

All arrays, variables or constants used must be declared for this algorithm.

All inputs and outputs must contain suitable messages.

[15]