Congratulations! You passed!

Grade received 100%

To pass 80% or higher

1.

Question 1

Which has the largest time to compute?

1 / 1 point

O(log n)

O(N)

O(1)

Correct

That’s correct! This is known as linear time. As the input increases so does the time to compute an output.

2.

Question 2

Given the following lines of code pseudocode;

N = 7

FOR i = 1 TO N:

output(i)

1 / 1 point

O(N)

O(1)

O(n^2)

Correct

That’s correct! As the loop is set to the size of N, when N increases so does the time complexity.

3.

Question 3

Given the following lines of code pseudocode;

N = 7

FOR i = 1 TO N:

FOR j = 1 TO N:

output(N)

1 / 1 point

O(N)

O(1)

O(n^2)

Correct

That’s correct. There are 2 loops so every time the application runs, it must do N\*N executions.

4.

Question 4

Given the following lines of code pseudocode:

N = 37

FOR i = 1 TO N:

WHILE i < 10:

output(i\*N)

1 / 1 point

O(1)

O(N)

O(n^2)

Correct

That’s correct. The inner loop is only run a finite number of times that does not increase with N.

5.

Question 5

Given the following lines of code pseudocode;

N = 37

FOR i = 1 TO N:

WHILE i < 10:

output(i\*N)

1 / 1 point

O(1)

O(n^2)

O(N)

Correct

That’s correct. The inner loop is only run a finite number of times that does not increase with N.

6.

Question 6

Given the following lines of code pseudocode:

N = 10

FOR i = 1 TO 5:

FOR j = 1 TO i:

output(i\*j)

1 / 1 point

O(1)

O(n^2)

O(Log N)

Correct

That’s correct. As I is limited to 5. Regardless of how large the input becomes it will always be limited to the number of executions.

7.

Question 7

Given the following lines of code pseudocode: output(N)

N = 7

FOR i = 1 TO N:

FOR j = 1 TO N:

output(N)

1 / 1 point

O(n^2)

O(1)

O(N)

Correct

That’s correct. There are 2 loops so every time the application runs, it must do N\*N executions.