Congratulations! You passed!

Grade received 85.71% **To pass** 80% or higher

Go to next item

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. Given the following lines of code pseudocode; **1 / 1 point**

```
N = 7

FOR i = 1 TO N:

    output(i)
```

- `O(n^2)`
- `O(1)`
- (•) `O(N)`

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

3. Given the following lines of code pseudocode; **1 / 1 point**

```
N = 7

FOR i = 1 TO N:

    FOR j = 1 TO N:

        output(N)
```

- `O(1)`
- (•) `O(n^2)`

- ○ `O(N)`

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

4. Given the following lines of code pseudocode: **1 / 1 point**

```
N = 37

FOR i = 1 TO N:

      WHILE i < 10:

            output(i*N)
```

- ○ `O(n^2)`
- ◉ `O(N)`
- ○ `O(1)`

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

5. Given the following lines of code pseudocode; **1 / 1 point**

```
N = 37

FOR i = 1 TO N:

        WHILE i < 10:

                output(i*N)
```

- ○ `O(n^2)`
- ◉ `O(N)`
- ○ `O(1)`

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

6. Given the following lines of code pseudocode: **0 / 1 point**

```
N = 10

FOR i = 1 TO 5:

        FOR j = 1 TO i:

                output(i*j)
```

- (●) `O(Log N)`
- ( ) `O(n^2)`
- ( ) `O(1)`

Incorrect
Not quite. The execution of the code is not dependent on N so it will not use log when computing the complexity.

7. Given the following lines of code pseudocode: output(N) **1 / 1 point**

```
N = 7

FOR i = 1 TO N:

        FOR j = 1 TO N:

            output(N)
```

- ( ) `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.