

Challenge 7: Nested Loop with Multiplication (Pro)

A pro-level exercise based on the Big O of an algorithm which involves nested loops and the loop variables increment with multiplication and addition.

We'll cover the following ^

- Problem Statement
- Code Snippet

Problem Statement

Compute the Big O complexity of the code snippet given below. It is better to solve it on a piece of paper and then see if your answer matches with the correct option!

Code Snippet

```
1 n = 10 # can be anything
2 sum = 0
3 pie = 3.14
4 j = 1
5 for var in range(n):
6     while j < var:
7         sum += 1
8         j *= 2
9     print(sum)
10
```



Answer the following question and see if your result matches the correct answer!

Q Which of the following best describes the Big(O) of the program written above?

☐ A) $O(\log n)$

☐ B) $O(n \log n)$

☐ C) $O(n)$

☐ D) $O(n^2 \log n)$

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Solution Review: Nested Loop with M...

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