

Challenge 4: Nested Loop with Multiplication (Basic)

This is a little-advanced exercise based on the Big O of an algorithm which involves nested loops and the loop variables increment with multiplication.

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 # n can be anything, this is just an example
2 sum = 0
3 pie = 3.14
4 var = 1
5 while var < n:
6     print(pie)
7     for j in range(1, n, 2):
8         sum += 1
9         var *= 3
10 print(sum)
11
```



If you have computed the time complexity of the code snippet above, 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) $O(n)$

☐ B) $O(n \log_2(n))$

☐ C) $O(\log n)$

☐ D) $O(n^2)$



COMPLETED 0%

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Now let's move forward to a more complex nested loop problem and see if you can solve it on your own.

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Solution Review: Big O of Nested Loo...

Solution Review: Nested Loop with M...

Completed



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