

Problem statement[Send feedback](#)

You are given an integer ' n '.

Your task is to return a sorted array (in increasing order) containing all the factorial numbers which are less than or equal to ' n '.

The factorial number is a factorial of a positive integer, like 24 is a factorial number, as it is a factorial of 4.

Note:

In the output, you will see the array returned by you.

Example:

Input: ' n ' = 7

Output: 1 2 6

Explanation: Factorial numbers less than or equal to '7' are '1', '2', and '6'.

Detailed explanation (Input/output format, Notes, Images)**Sample Input 1:**

7

Sample Output 1 :

1 2 6

Explanation Of Sample Input 1:

Input: ' n ' = 7

Output: 1 2 6

Explanation: Factorial numbers less than or equal to '7' are '1', '2', and '6'.

Sample Input 2:

2

Sample Output 2:

1 2

Explanation Of Sample Input 2:

Input: ' n ' = 2

Output: 1 2

Explanation: Factorial numbers less than or equal to '2' are '1' and '2'.

Expected Time Complexity:

The expected time complexity is $O(m)$, where ' m ' is the number of factorial numbers which are less than or equal to ' n '.

Expected Space Complexity:

The expected space complexity is $O(m)$, where 'm' is the number of factorial numbers which are less than or equal to 'n'.

Constraints:

$$1 \leq n \leq 10^{18}$$

Time Limit: 1-sec