

2507. Smallest Value After Replacing With Sum of Prime Factors

Description

You are given a positive integer `n`.

Continuously replace `n` with the sum of its **prime factors**.

- Note that if a prime factor divides `n` multiple times, it should be included in the sum as many times as it divides `n`.

Return *the smallest value* `n` *will take on*.

Example 1:

Input: `n = 15`

Output: `5`

Explanation: Initially, `n = 15`.

`15 = 3 * 5`, so replace `n` with `3 + 5 = 8`.

`8 = 2 * 2 * 2`, so replace `n` with `2 + 2 + 2 = 6`.

`6 = 2 * 3`, so replace `n` with `2 + 3 = 5`.

`5` is the smallest value `n` will take on.

Example 2:

Input: `n = 3`

Output: `3`

Explanation: Initially, `n = 3`.

`3` is the smallest value `n` will take on.

Constraints:

- $2 \leq n \leq 10^5$

