

You are a product manager and currently leading a team to develop a new product. Unfortunately, the latest version of your product fails the quality check. Since each version is developed based on the previous version, all the versions after a bad version are also bad.

Suppose you have  $n$  versions  $[1, 2, \dots, n]$  and you want to find out the first bad one, which causes all the following ones to be bad.

You are given an API `bool isBadVersion(version)` which will return whether version is bad. Implement a function to find the first bad version. You should minimize the number of calls to the API.

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**Example:**

Given  $n = 5$ , and  $\text{version} = 4$  is the first bad version.

- call `isBadVersion(3)` -> false
- call `isBadVersion(5)` -> true
- call `isBadVersion(4)` -> true

Then 4 is the first bad version.