Problem 69: Sqrt(x)

Problem Information

Difficulty: Easy
Acceptance Rate: 41.01%
Paid Only: No
Tags: Math, Binary Search

Problem Description

Given a non-negative integer `x`, return _the square root of_`x` _rounded down to the nearest integer_. The returned integer should be **non-negative** as well.

You **must not use** any built-in exponent function or operator.

* For example, do not use `pow(x, 0.5)` in c++ or `x ** 0.5` in python.

Example 1:

Input: x = 4 **Output:** 2 **Explanation:** The square root of 4 is 2, so we return 2.

Example 2:

Input: x = 8 **Output:** 2 **Explanation:** The square root of 8 is 2.82842..., and since we round it down to the nearest integer, 2 is returned.

Constraints:

* `0 <= x <= 231 - 1`

Code Snippets

C++:

```
class Solution {
public:
int mySqrt(int x) {


}
};
```

Java:

```
class Solution {
public int mySqrt(int x) {


}
}
```

Python3:

```
class Solution:
def mySqrt(self, x: int) -> int:
```