

69. Sqrt(x)

Given a non-negative integer `x`, compute and return *the square root of* `x`.

Since the return type is an integer, the decimal digits are **truncated**, and only **the integer part** of the result is returned.

Example 1:

Input: `x = 4`

Output: 2

Example 2:

Input: `x = 8`

Output: 2

Explanation: The square root of 8 is 2.82842..., and since the decimal part is truncated, 2 is returned.

```
def mySqrt(self, x: int) -> int:
    lo = 1
    hi = x

    while lo <= hi:
        mid = (lo+hi)//2
        if mid*mid==x:
            return mid
        elif mid*mid>x:
            hi = mid-1
        elif mid*mid<x:
            lo = mid+1

    return hi
```