

69. Sqrt(x)

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`

