69. Sqrt(x)

Hint

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