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