Sliding Object
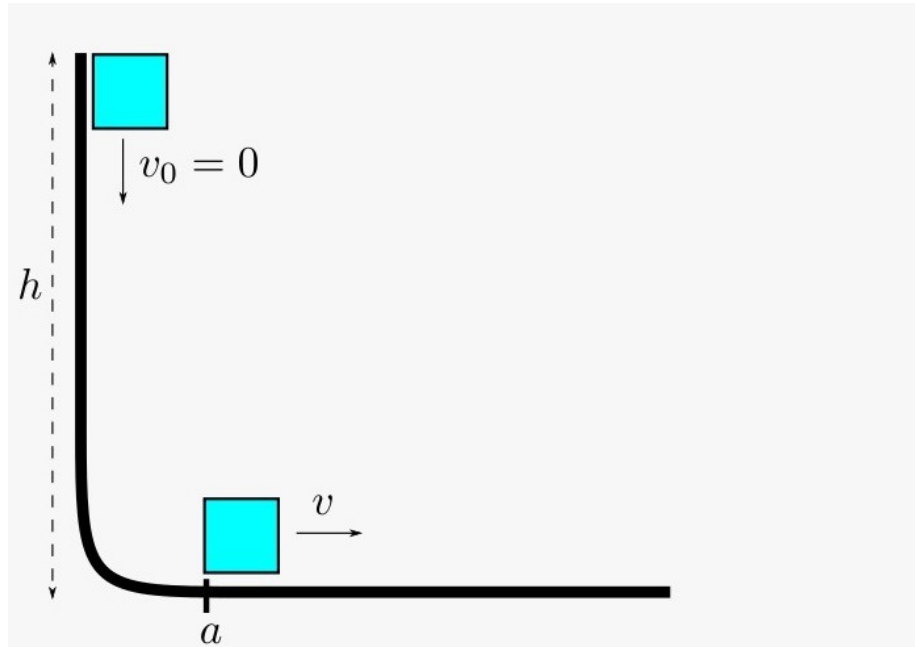

An object with mass M is released from a height of h meters from the ground with an initial speed $v_0 = 0$ m/s. You can assume that, after passing the point a on the ground, the object's potential energy (at height h) is fully converted to kinetic energy without any loss.

You can calculate the potential energy (P_E) and the kinetic energy (K_E) of the object as follows:

$$P_E = Mgh,$$

$$K_E = \frac{1}{2}Mv^2,$$

where g is the gravitational acceleration (9.81 m/s^2).

Write a program that finds the speed of the object, v, at point a where h will be given by the user as a floating point number. Your program should print the result as a `float` with at most 2 digits after the decimal point.

Hint 1: You can use the `round` function as in `round(x,n)` to keep at most the first `n` digits after the decimal point.

Hint 2: To take the square root of a number `x`, you can use the exponentiation operator as `x**0.5`.

SAMPLE I/O:

```
Input:
     1.0
Output:
     4.43

Input:
     78.48
Output:
     39.24
```