

# Exercise: Integer Square Root

Challenge yourself with an exercise in which you'll have to return the largest integer whose square is less than or equal to the given integer.

## WE'LL COVER THE FOLLOWING ^

- Problem
- Coding Time!

## Problem #

You are required to write a function that takes a non-negative integer, `k`, and returns the largest integer whose square is less than or equal to the specified integer `k`.

Let's have a look at some examples:

Input : 300

↓

**Integer Square Root**

↓

Output: 17  
 $(17)^2 = 289 < 300$   
 $(18)^2 = 324 > 300$   
so the number  
17 is the correct response.

Input : 12



Integer Square  
Root



Output: 3

$(3)^2 = 9 < 12$

$(4)^2 = 16 > 12$

so the number

3 is the correct response.

2 of 2

—



## Coding Time! #

Your task is to return the largest integer whose square is less than or equal to the `k` from the function `integer_square_root(k)` given in the code widget below. The input parameter `k` is a non-negative integer. Make use of a binary search strategy in your solution.

Good luck!

```
def integer_square_root(k):  
    pass
```

