[CS 11] Prac 0f – Pig in hole

oj.dcs.upd.edu.ph/problem/cs11prac0f

Submit solution
My submissions
Points: 100 (partial)

Time limit: 4.0s

Memory limit: 1G

Author:
kvatienza (Kevin Atienza)
Problem type

Allowed languages

~~NONE~~, py3

Problem Statement

There are pp pigs and hh holes. Each of these pp pigs is in one of the holes.

Having many pigs in holes means that surely, one of the holes will have a lot of pigs.

Is there always a hole with at least mm pigs, regardless of how the pigs are distributed in the holes?

Task Details

Your task is to implement a function called `has_piggy_hole`. This function has three parameters `p`, `h` and `m` in that order, all `int`s, whose meanings are described in the problem statement. In particular, your function will be declared as follows:

Copy

```
def has_piggy_hole(p, h, m):
```

The function must return a `bool`. It must return `True` if there's always a hole with at least mm pigs regardless of how the pigs are distributed in the holes, and `False` otherwise.

In this lab session, binding/assignment statements are **not** allowed, unless otherwise stated.

Example Calls

Example 1 Function Call

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```
has_piggy_hole(24, 6, 2)
```

Example 1 Return Value

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```
True
```

Example 2 Function Call

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```
has_piggy_hole(24, 6, 6)
```

Example 2 Return Value

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```
False
```

Example 3 Function Call

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```
has_piggy_hole(1000, 1, 10000)
```

Example 3 Return Value

Copy

```
False
```

Constraints

When the program is run:

- The function `has_piggy_hole` will be called at most 10,00010,000 times.
- In each function call, each argument will be a nonnegative integer at most 1020010^{200}, and h>0$h > 0$.

Scoring

- You get 2020 ❤️ points if you solve all test cases where p≤109$p \leq 10^9$, and p p is divisible by hh.
- You get 2020 ❤️ points if you solve all test cases where p≤109$p \leq 10^9$.
- You get 2020 ❤️ points if you solve all test cases where pp is divisible by hh.
- You get 4040 ❤️ points if you solve all test cases.

Thus, you can earn up to 100100 points from this problem.
Report an issue

Clarifications

No clarifications have been made at this time.