Problem 3516: Find Closest Person

Problem Information

Difficulty: Easy
Acceptance Rate: 89.01%
Paid Only: No
Tags: Math

Problem Description

You are given three integers `x`, `y`, and `z`, representing the positions of three people on a number line:

* `x` is the position of Person 1. * `y` is the position of Person 2. * `z` is the position of Person 3, who does **not** move.

Both Person 1 and Person 2 move toward Person 3 at the **same** speed.

Determine which person reaches Person 3 **first** :

* Return 1 if Person 1 arrives first. * Return 2 if Person 2 arrives first. * Return 0 if both arrive at the **same** time.

Return the result accordingly.

Example 1:

Input: x = 2, y = 7, z = 4

Output: 1

Explanation:

* Person 1 is at position 2 and can reach Person 3 (at position 4) in 2 steps. * Person 2 is at position 7 and can reach Person 3 in 3 steps.

Since Person 1 reaches Person 3 first, the output is 1.

Example 2:

Input: x = 2, y = 5, z = 6

Output: 2

Explanation:

* Person 1 is at position 2 and can reach Person 3 (at position 6) in 4 steps. * Person 2 is at position 5 and can reach Person 3 in 1 step.

Since Person 2 reaches Person 3 first, the output is 2.

Example 3:

Input: x = 1, y = 5, z = 3

Output: 0

Explanation:

* Person 1 is at position 1 and can reach Person 3 (at position 3) in 2 steps. * Person 2 is at position 5 and can reach Person 3 in 2 steps.

Since both Person 1 and Person 2 reach Person 3 at the same time, the output is 0.

Constraints:

* `1 <= x, y, z <= 100`

Code Snippets

C++:

```
class Solution {
public:
```

```
int findClosest(int x, int y, int z) {

}
};
```

Java:

```
class Solution {
public int findClosest(int x, int y, int z) {

}
}
```

Python3:

```
class Solution:
def findClosest(self, x: int, y: int, z: int) -> int:
```