

# How Many Steps?

Observe the diagram in *Figure 1* depicting a path from the point of origin  $O(0, 0, 0)$  to  $P(2, 1, 2)$ . This path contains five steps, namely:  $(0, 0, 0) \rightarrow (1, 0, 0) \rightarrow (1, 1, 0) \rightarrow (2, 1, 0) \rightarrow (2, 1, 1) \rightarrow (2, 1, 2)$ . Notice that in each step, only one value of either  $x$ ,  $y$ , or  $z$  coordinate may be altered. In other words, the only allowed movement is one step along the  $x$  axis, one step along the  $y$  axis, or one step along the  $z$  axis. For example, the path in *Figure 1* consists of a series of movements as follows: one step along  $x$  axis, one step along  $y$  axis, one step along  $x$  axis, one step along  $z$  axis, and one step along  $z$  axis.

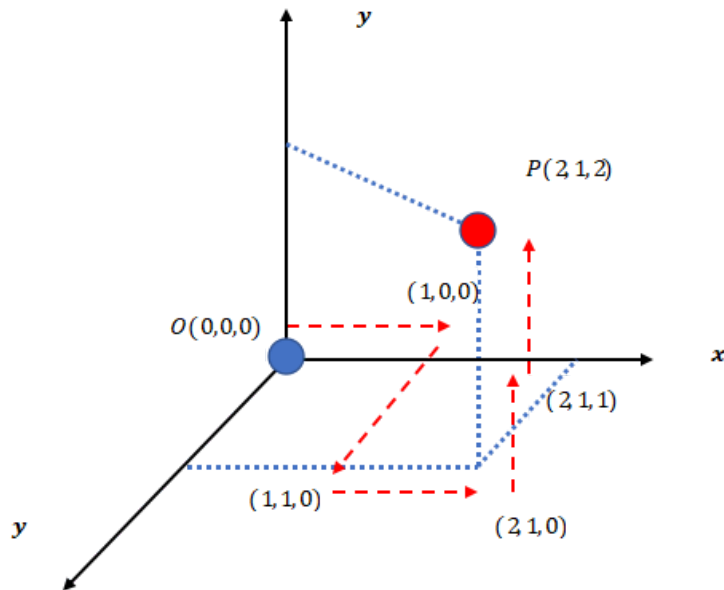


Figure 1: The diagram depicting a path from  $O(0,0,0)$  to  $P(2,1,2)$ .

Obviously, there are more than one possible path from  $O(0, 0, 0)$  to  $P(2, 1, 2)$ . Three possible paths are as follows:

1.  $(0, 0, 0) \rightarrow (1, 0, 0) \rightarrow (1, 1, 0) \rightarrow (2, 1, 0) \rightarrow (2, 1, 1) \rightarrow (2, 1, 2)$  (as depicted in *Figure 1*),
2.  $(0, 0, 0) \rightarrow (1, 0, 0) \rightarrow (2, 0, 0) \rightarrow (2, 1, 0) \rightarrow (2, 1, 1) \rightarrow (2, 1, 2)$ , and
3.  $(0, 0, 0) \rightarrow (0, 1, 0) \rightarrow (1, 1, 0) \rightarrow (1, 1, 1) \rightarrow (1, 1, 2) \rightarrow (2, 1, 2)$ .

In this problem, your task is to **determine the minimum number of steps** from the point  $A(x_A, y_A, z_A)$  to point  $B(x_B, y_B, z_B)$  given that  $x_A, y_A, z_A, x_B, y_B, z_B$  are integers. Each step must be a movement along  $x$  axis,  $y$  axis, or  $z$  axis.

## Input Format

The input consists of two lines, each line contains three integers separated by a space. The first line contains three integers  $x_A, y_A$ , and  $z_A$  depicting the coordinate for original point of the movement. The second line contains three integers  $x_B, y_B$ , and  $z_B$  describing the coordinate for the terminal point of the movement.

## Constraints

$$-10^6 \leq x_A, y_A, z_A, x_B, y_B, z_B \leq 10^6$$

## Output Format

Output is a number  $N$  depicting the minimum number of steps required from point  $A(x_A, y_A, z_A)$  to  $B(x_B, y_B, z_B)$  .

**Sample Input 0**

```
0 0 0
2 1 2
```

**Sample Output 0**

```
5
```

**Explanation 0**

Based on the above problem description, the minimum number of steps required from point  $A(0, 0, 0)$  to point  $B(2, 1, 2)$  is 5.