

Triway Cup '19 Summer F - Race

Time limit: 1.0s **Memory limit:** 256M

A point in Minecraft can be represented as a 3-D coordinate. Currently, Chebyshev The Creeper, Euclidean The Enderman and Manhattan The Magma Cube are having a race. Each of them wants to know how long it will take them to go from the coordinates (A, B, C) to the coordinates (X, Y, Z) .

Every second, Chebyshev The Creeper can change his x-coordinate by **at most** one, y-coordinate by **at most** one, and z-coordinate by **at most** one.

Euclidean The Enderman will travel the straight line distance from (A, B, C) to (X, Y, Z) and teleports at a speed of 1 unit per second.

Every second, Manhattan The Magma Cube can hop once, which will alter either his x-coordinate by one, y-coordinate by one, or z-coordinate by one.

Input Specification

The first line will contain three spaced integers representing A, B, C respectively.

The second line will contain three spaced integers representing X, Y, Z respectively.

$$|A|, |B|, |C| \leq 10^3$$

$$|X|, |Y|, |Z| \leq 10^3$$

Output Specification

The output should consist of exactly three lines.

The first line should contain the time it takes for Chebyshev The Creeper to finish the race.

The second line should contain the time it takes for Euclidean the Enderman to finish the race, rounded down to the closest integer.

The final line of output should contain the time it takes for Manhattan The Magma Cube to finish the race.

Sample Input

```
3 -2 1
4 -1 3
```

Sample Output

2

2

4