

# DMOPC '17 Contest 2 P0 - Secrets

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**Time limit:** 2.0s    **Memory limit:** 64M

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Two secret agents are exchanging messages over a computer, however, they notice that there is a shady being nearby. Given the coordinates of the two secret agents  $(x_1, y_1)$  and  $(x_2, y_2)$ , and the shady being,  $(x_s, y_s)$ , is the shady being within  $D$  units of an agent?

## Constraints

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$$-100 \leq x_1, y_1, x_2, y_2, x_s, y_s \leq 100$$

$$1 \leq D \leq 100$$

## Input Specification

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The first line will consist of two space separated integers,  $x_1$  and  $y_1$ .

The second line will consist of two space separated integers,  $x_2$  and  $y_2$ .

The third line will consist of two space separated integers,  $x_s$  and  $y_s$ .

The fourth and final line of input will consist of a single integer,  $D$

## Output Specification

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Yes, if the agent is within  $D$  units of either agent, and  No otherwise.

## Sample Input

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1 10
2 3
3 3
10
```

## Sample Output

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Yes
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## Explanation for Sample Output

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The distance between the second secret agent and the shady being is 1, which is less than or equal to 10. The distance between the first secret agent and the shady being is  $\sqrt{53}$ , which is also less than or equal to 10.