

A. Meeting of Old Friends

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

Today an outstanding event is going to happen in the forest — hedgehog Filya will come to his old friend Sonya!

Sonya is an owl and she sleeps during the day and stay awake from minute l_1 to minute r_1 inclusive. Also, during the minute k she prinks and is unavailable for Filya.

Filya works a lot and he plans to visit Sonya from minute l_2 to minute r_2 inclusive.

Calculate the number of minutes they will be able to spend together.

Input

The only line of the input contains integers l_1, r_1, l_2, r_2 and k ($1 \leq l_1, r_1, l_2, r_2, k \leq 10^{18}$, $l_1 \leq r_1, l_2 \leq r_2$), providing the segments of time for Sonya and Filya and the moment of time when Sonya prinks.

Output

Print one integer — the number of minutes Sonya and Filya will be able to spend together.

Examples

input
1 10 9 20 1
output
2

input
1 100 50 200 75
output
50

Note

In the first sample, they will be together during minutes 9 and 10.

In the second sample, they will be together from minute 50 to minute 74 and from minute 76 to minute 100.

Codeforces Round #371 (Div. 2)

Finished

→ Virtual participation

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Start virtual contest

→ Problem tags

math

No tag edit access

→ Contest materials

- Tutorial